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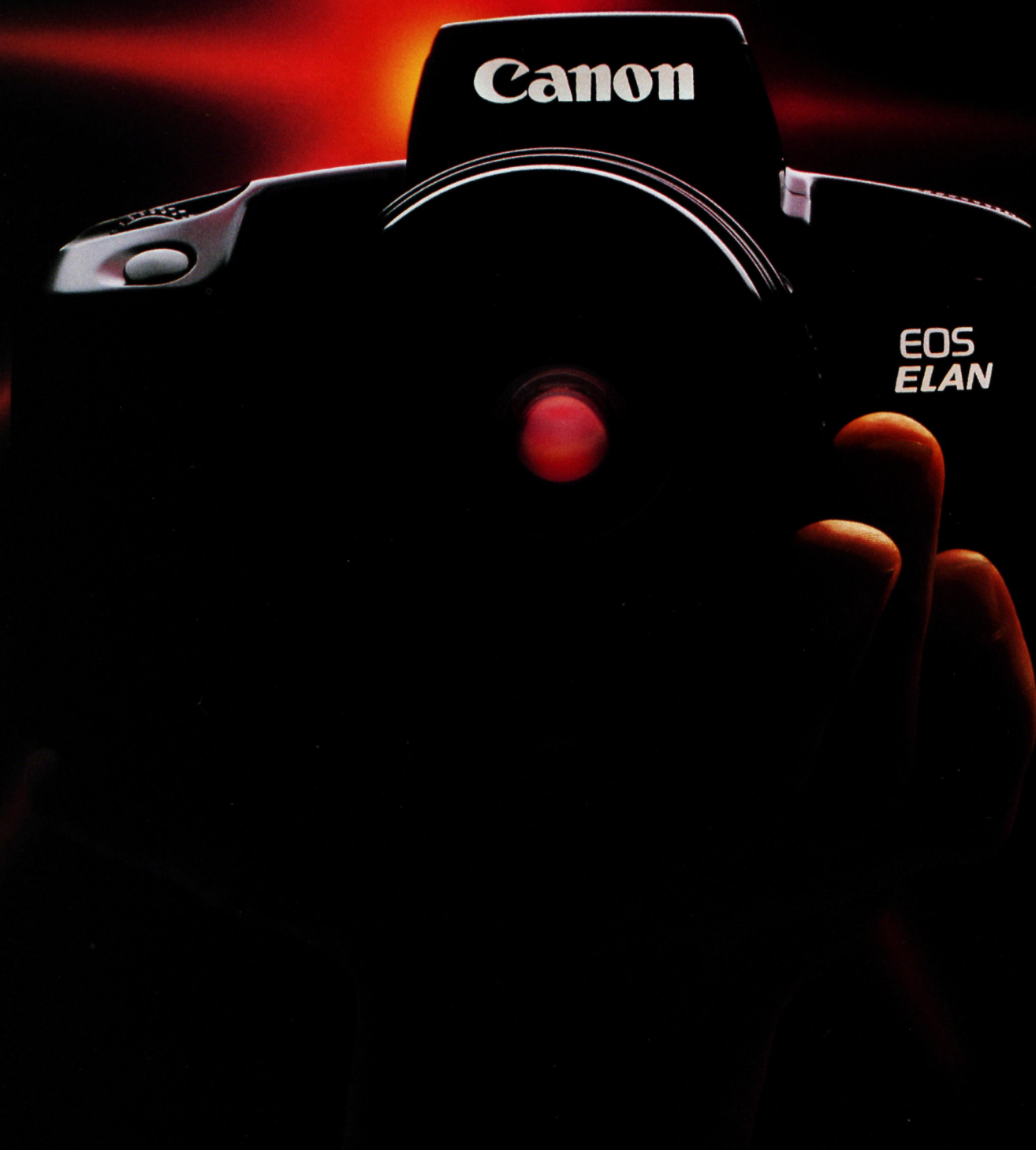
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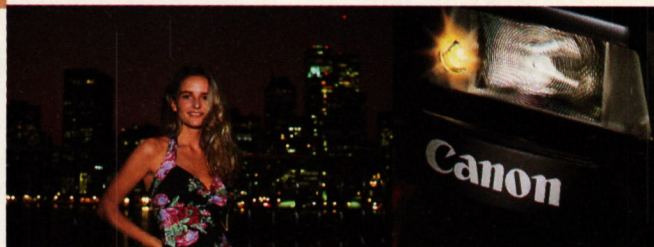
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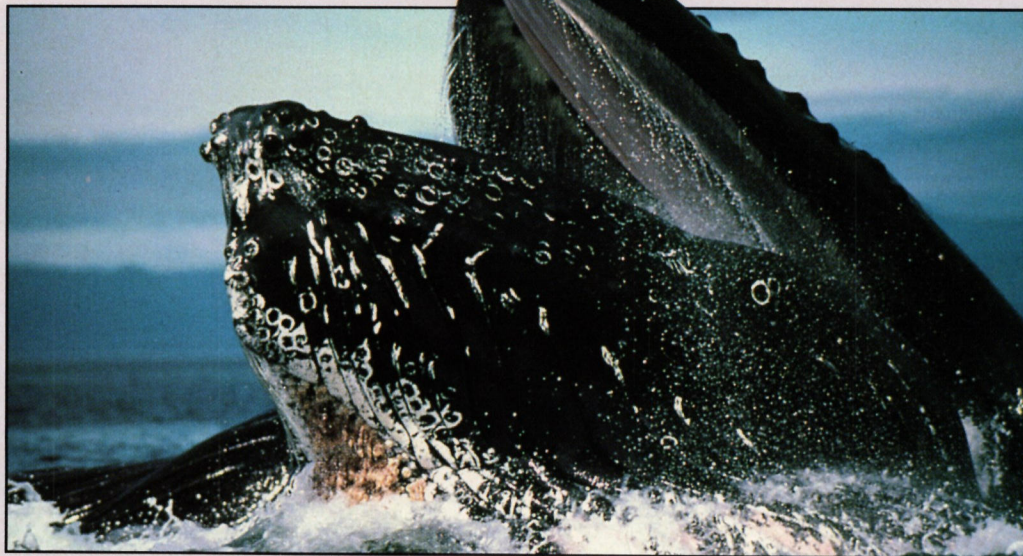


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MICHIO HOSHINO

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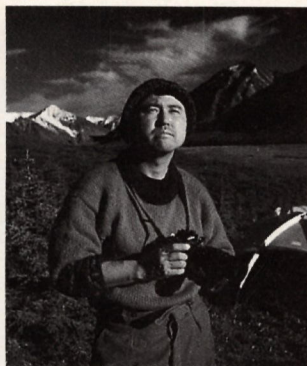
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In This Issue



*Glacier goat, Michio Hoshino:
the right timing, the right company*

Be in the right place at the right time." "You make your own luck." "f/8 and be there!" These are all flippant answers to the interminable question: "What did you do to get that *great* shot?" In answer, the individuals quoted above are trying to say that subject and opportunity always take precedence over gadgetry and technique.

We'd like to be a bit more detailed with our answers, and to that end, our staff has put together a special article that pinpoints some answers. We call it "Nature's Big 20 Events." It's our second installment on the subject—January/February 1991 was our first. That feature was met with such enthusiasm, we decided to make it an annual event in itself.

We admit we are not the originators, merely the modifiers. We saw the treatment first in *Backpacker* magazine. There are those times and places when and where nature puts on its best display, and on those occasions it's a perfect time to be hiking, camping and observing. We think there are certain events particularly attractive to photographers, and in fact, it seems it is at these events where many of the best photographs are taken by the best photographers.

It is those events with the most photographic possibilities that we highlight in this issue. After years of receiving submissions and talking to photographers around the country, a pattern of productive places and dates develops, like a pin map. We share the standouts with you, and we choose

our January/February issue to do so to allow you plenty of time for travel planning for 1992 vacations and outings. We've limited our selection to domestic destinations, since we recognize that recession-weary travelers are staying closer to home.

This year's "Nature's Events" was compiled by Michael Wyatt, a former *Backpacker* editor who did the same while on staff for that magazine. He's both an experienced outdoorsman and photographer.

One particular domestic destination continues to be a Mecca for photo pilgrimages (or den-chair dreams): Alaska. Without fail, our reader surveys continue to show that this "biggest" state figures greatly in future travel plans, if not hopes. In this issue we single out photographer Michio Hoshino's passion for Alaska's wildlife and native culture. While he is rapidly becoming well known in this country, his name is already well-established among nature enthusiasts in his native Japan, where nature appreciation is indistinguishable from religion. We think Hoshino has a distinctive way of viewing our favorite wildlife-safari state that captures the grandeur missed by the more common trophy-head hunters.

Hoshino's images are now marketed by Larry Minden of Minden Pictures. When we first met Larry, he was Frans Lanting's assistant. He continues to handle Lanting's work and has added Jim Brandenburg to his client list. That certainly puts Hoshino in the right company.

—Steve Werner, Editor

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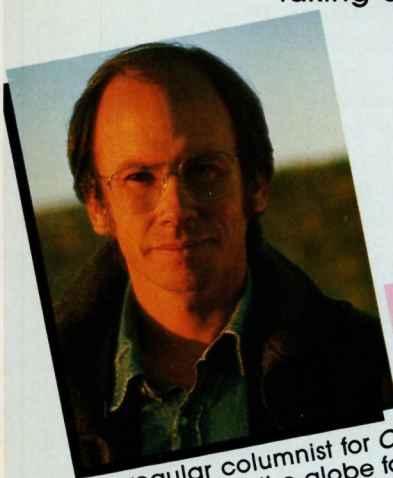
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Dewitt Jones is one of the country's premier landscape photographers and a regular columnist for *OUTDOOR PHOTOGRAPHER*. He has traveled the globe for the past 17 years as a photographer for *National Geographic* and has published six art books. Two of his films have been nominated for Academy Awards. Jones is an entertaining speaker, and his seminars are known for their balance of technical tips, insights into the subject matter, humor and, above all, exceptional photographs.

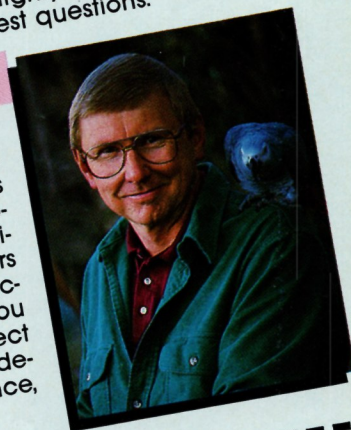
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George Lepp is a regular contributor and columnist for *OUTDOOR PHOTOGRAPHER*. His credits include *Natural History*, *Science*, *National Wildlife*, *Car & Driver*, *Autoweek*, *Reader's Digest* and *People* magazines, and *National Geographic Books*. He graduated from Brooks Institute of Photography, has conducted nature lecture series for Canon USA and Nikon, Inc., and publishes a quarterly newsletter, *The Natural Image*. George's six-projector multi-image program includes: "Macro" (close-up) covers

gear and methods for flash and natural light, high-magnification and general tips for flowers and insects; "Birds and Wildlife" covers maximum quality from long lenses, approaching subjects, blinds, zoo and expedition photography; and "Landscape" covers 35mm techniques for using wide-angle, macro and telephoto lenses; plus everything you wanted to know about films, special effect filters and autofocus. All seminars are designed for a broad spectrum of experience, from amateur to professional.



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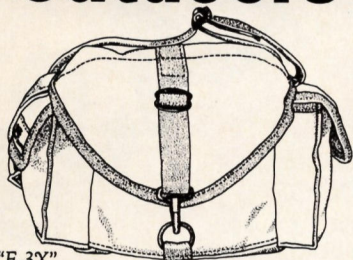
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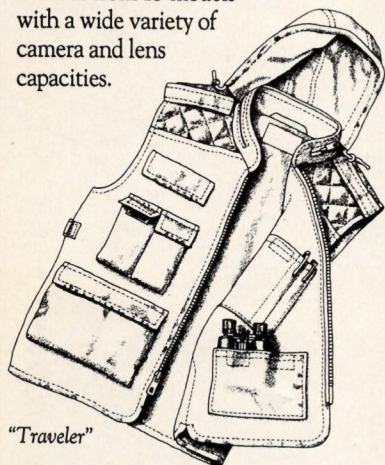
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In Defense Of Medium Format

We were happy to see images taken with medium format cameras in your June 1991 issue in "The Happy Medium." The article starts with the absolutely correct quote, "No matter how good you get, your best 35mm slide will lose out to your best 2 1/4 slide."

Later on, however, the article is unfavorable toward medium format mainly because the photographer used only one camera—one that is not even a typical medium format camera type. Instead of carrying a camera that alone weighs almost five pounds, the author could have reduced the weight by 1 1/2 pounds. By selecting a Hasselblad weighing little more than some 35mm SLRs, photographing in the medium format need not become a "Swarzeneggerian affair."

Your copy: "...I reluctantly concluded only a heavy tripod and ball-head could dampen a shutter that opens with the impact of a guillotine." My comment: Medium format cameras, shutters, lenses, mirrors, and everything else are larger and could cause more vibration, but a medium format shutter need not operate like a guillotine. Hasselblads and other medium format cameras use lens shutters that are exceptionally smooth. They open and close around the optical axis of the lens rather than horizontally or vertically across the film plane and probably cause even less vibration than focal plane shutters in some 35mm's. Even the focal plane shutter in the Hasselblad 205TCC is exceptionally well dampened and not comparable to a guillotine.

Mr. Martin's statement is not necessarily incorrect, but is based on a camera not typical of medium format cameras available to photographers.

Ernst Wildi

Victor Hasselblad, Inc.
Fairfield, New Jersey

Lepp Seminars A Hit

My daughter and I were among the 400 or so who attended George Lepp's seminar in Dallas in August. The day-long affair flew by quite too fast, for we thoroughly enjoyed this exceptional opportunity, and wish to commend *OUTDOOR PHOTOGRAPHER* and Canon for co-sponsoring this event. Mr. Lepp is so personable, inspira-

tional and professional, and the day was one we'll not soon forget.

Ann Brandon
Austin, Texas

We're happy to report the Dallas seminar was no fluke. All five of George Lepp's Canon/OUTDOOR PHOTOGRAPHER seminars drew hundreds of photographers eager to benefit from George's years of experience. The final event in San Diego had more than 500 attendees.

Moon Shooting

Have you or will you run an article on photographing the moon? I have been trying for many years to capture the mystique and beauty of our lunar neighbor on film.

I have a Nikon F2 and have used a 135mm Nikkor f/3.5 and a Vivitar 85-205mm f/3.5 without a great deal of success to date.

D. Hayes
Westmont, Illinois

Our most recent "moon" story is on page 66 of this issue. In our March 1989 issue, Frank Zullo wrote "Moon, Stars and You." Here are some "ballpark" exposure basics that Zullo recommends in his article. For ISO 100 film, expose 1/500 sec. and set aperture as follows: f/4 for crescent moon, f/5.6 for half-moon, f/8 for full moon. Use at least a 200mm lens because a 500mm or longer telephoto will show details. Generally, set the minimum shutter speed to 1/500 sec. since the moon is always moving, and use a spot meter if possible.

We Goofed Dept.

In the "Winter Wish Guide" article (November 1991 issue), the wrong photo ran on page 61. It should have shown the Hasselblad 205 TCC described in the caption titled "Merry Medium Format!" In the same article, the caption "Glad Tidings from Mamiya" quoted incorrect prices. It should have read: "...Mamiya 6 (\$1,450) 50mm f/4 wide-angle (\$1,385) 75mm f/4.5 (\$1,120) and 150mm f/4.5 (\$1,528) lenses."

Photo Adventure Addendum

Readers may be saddened to learn that the Alaskan brown bear frolicking in greenery in my photograph on page 31 of the December issue "is probably

hanging on someone's wall this winter," according to Mike McBride of Chenik Brown Bear Photography Camp. I shot the picture from Mike's front deck last July and hunters in the fall shot five bears within two miles of the camp this fall. The bears were habituated to human presence and McBride, a licensed hunting guide himself, believes that the shooting of bears habituated to photographers "flies in the face of the ethics of fair chase."

The Alaska Board of Games declined to protect areas adjoining Chenik and nearby McNeil River last fall, despite considerable pressure from wildlife photographers and other wildlife groups.

—Galen Rowell

Caving In

It was with great surprise and equally great pleasure that I read your "Day for Night" article in the November 1991 issue. There were a few mistakes in the text. Helictites are not actually formed drop by drop; more recent research has shown they have a tiny central canal and water moves through them hydrostatically and forms conical crystals that do not fit nicely together. The result is the erratic bends typical of helictites.

Also, I have been a regular explorer (and photographer) of Lechuguilla and assure you that it is far from the largest cavern in the world with its nearly 60 miles of passage. Mammoth/Flint Ridge in Kentucky has some 330 miles of caverns mapped and will undoubtedly go over 400 in this decade. (I also explore there.)

Some of your readers may be interested to see more pictures of Lechuguilla. There are two sources that I know of: a coffee-table format book, *Lechuguilla: Jewel of the Underground*, from Speleo Projects, and a set of 56 slides covering most of the cave known to explorers through 1990 from Vinyard's Choice.

Roland Vinyard
Johnstown, New York

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Eagle Haven

Location: It comes as a surprise to many, but there's no need to venture as far as Alaska to find bald eagles in significant numbers. Some of my best eagle photographs have come from the Midwest on the Mississippi River.

The magnificent fishers are attracted to the open water at the lock and dam area near Winfield, Mo., only 30 miles north of my hometown of St. Louis.

Best Time: Peak time for the congregating eagles is the last two weeks in December through the last two weeks in February. If there are some unseasonably warm days in February, you'll witness mating rituals along the nearby bluffs. The eagles soar high, lock talons, fall down together, break loose, thermal back up and do it all over again.

Weather: During the heart of winter,

the climate is fairly cooperative in Missouri and there are more blue-sky days than at any other time of year. You have a snowstorm or two, but afterward the skies are cobalt blue with wonderful lighting.

At daybreak, a contrast to the "crisp and clear" is the morning fog that rises from the river, cast in gold by the early sun.

The Photo Experience: Missouri has the second-highest concentration of wintering bald eagles in the lower 48 states. The eagles remain for about five months before returning north. Several years ago, my wife and I bought a half-mile of Mississippi River frontage where the eagles perch and fish. Some developers had planned a boat marina there.

I decided it had to remain an area for eagles. The morning I made this photo, it

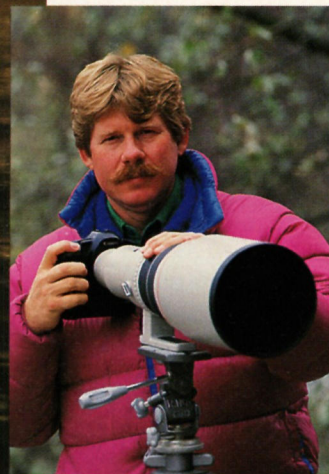
By Frank Oberle

was five degrees above zero. I drove out to my blind before sunrise, at about 5:30 a.m. There's no heater in the blind, so I brought plenty of hot tea and wore many layers of clothing. For my feet, I'm a firm believer in those inflated "Mickey Mouse" boots used by the Army in Alaska.

On this day, the shad were concentrated in the water near my blind, so the eagles fed very well.

It was so cold, I could hear the branches creak as the birds lunged to take flight. When that happened, I took my hands out of my pockets (I don't wear gloves) and "gunsighted" the camera to where I thought a bird would strike. They usually circle once or twice to play the wind just right before dropping from the sky. That delay gives me just enough time to get my lens on target.

When they dive, I start shooting. Following and focusing with a large telephoto takes practice, but the results can be spectacular.



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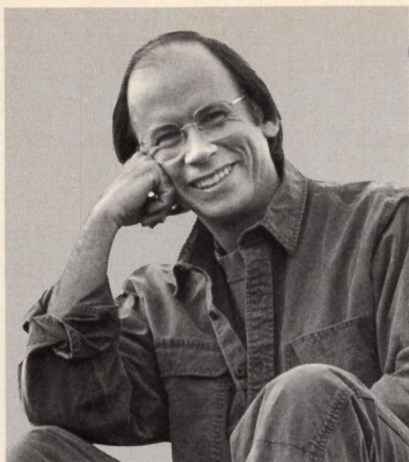
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Basic Jones

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This simple mantra for creative action will help your photography transcend the ordinary

TEXT AND PHOTOGRAPHY BY DEWITT JONES

George Hunt, managing editor of *Life* Magazine in the '60s once said, "No matter how much it has been improved since the days of Daguerre, the camera is never as important as the taste and imagination of the person who uses it." How true.

In earlier times, photographers had to spend years bringing their technical expertise to a level where they could even begin to translate their taste and imagination onto film. Today

new technologies make it frighteningly easy to take technically perfect pictures the first time you pick up

a camera. But as the technical side becomes so much easier, we are thrown even harder against the question, What is our vision? And can we feel it? Can we articulate it?

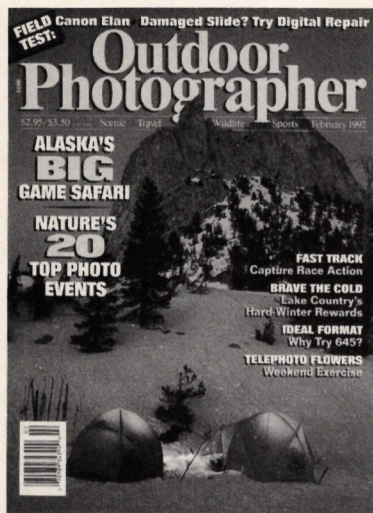
For me, there are three stages to taking a photograph—feeling, articulation and technique—FAT for short.

Feeling is probably the most elusive part of any creative endeavor, but ultimately the most rewarding. As my friend Rik

(Cont'd on page 14)



Cover Shot



Photographer: Galen Rowell
Subject: Winter camp at Cathedral Peak, Yosemite National Park
Equipment: Nikon F3, Nikkor 24mm f/2.8.

Exposure: f/5.6 at approximately 1-2 minutes on Fuji Pro 50

Situation: We were on a 17-day expedition skiing the John Muir Trail, which traces the Sierra Nevada crest from Mt. Whitney in the south to Yosemite Park in the north. On one day we paused to climb Cathedral Peak, seen in the background of this photograph then pitched camp at its base that evening.

With my camera fixed on a tripod, I set the exposure compensation dial on +1 (to allow for the effect of film reciprocity failure during long exposures) and set the shutter speed dial to "A" for automatic exposure. While the shutter remained open for one or two minutes, I scrambled inside each tent and manually fired my SB-16B strobe to light each shelter like a Chinese lantern. The bright yellow tents bring a warm, homey feeling to an otherwise cold, dusky snow scene.

During the long exposure, one of the expedition members inadvertently stepped out of his tent and paused by the group of trees between the domes—apparently not realizing that the shutter was still open. I yelled for him to move away as soon as I noticed him, but it was too late. If you look closely, you can see the ghostly image of him still standing there.

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Basic Jones

(Cont'd from page 12)

Cooke says, "Photography is not really about exposing film, it's about exposing yourself." It's having the guts to get involved in the scene before you, allowing yourself to get lost in the beauty of an autumn leaf, the purity of a child's face or the power of a summer storm. It's these emotions that will ultimately give energy and passion to your photographs. Shrink from them and your photos are doomed from the start.

Techniques are all the tools we use to bring these feelings into the finished photograph.

That leaves *articulation*. This is the part of the process that is usually the most neglected. All too often when I ask a student why they took a particular photograph, the answer is, "I don't really know...I just kind of liked it."

Yet, if we can't clearly articulate

the feelings that move us to raise our camera, we will never be able to frame and expose the scene in such a way as to carry those feelings to the viewer.

Once I have a clear grasp of why I'm taking the picture, my mind can run a "technique checklist," a simple

...if we can't clearly articulate the feelings that move us to raise our camera, we will never be able to frame and expose the scene in such a way as to carry those feelings to the viewer.

mantra to determine if every technique I am using either enhances what's turning me on or helps to get rid of anything that might detract from it.

In practice, the lines between the

feeling, articulation and technique merge and blur. My own internal dialogue might go something like this: "Whoa! The sunset! The beach! The water and sand between my toes!" There's the *feeling*. Then the *articulation*: "The color in the western sky." And the *technique*: Wide angle lens to whole sky in the frame. Warming filter to hold the color, it's fading fast." Again *articulation*: "The reflection of the sun on the wet sand." Followed by *technique*: "Tilt down frame both the sky and the sand. Use a graduated neutral-density filter to darken the sky and still hold detail in the foreground." More *articulation*: "The water of the waves running over my

feet and back into the ocean." And more *technique*: "Shoot when the wave is going out. Use a slow shutter speed to give a feeling of movement to the receding wave. Shoot more



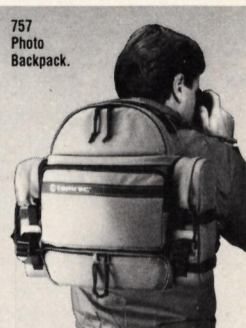
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than one shot, you don't know what the wave pattern will look like." *Technique:* "Can you hand-hold an eighth of a second? Should be able to with this 20mm lens. Not really time to hassle with the tripod. Okay, shoot a few hand-held and then set up the tripod if the light's still there. Get those tripod legs soaked with salt water again and I'll kill you!"

The articulation took the feelings (The sunset! The beach! The water and sand between my toes!) and brought them clearly into focus so I could easily choose the techniques to best express them. FAT!

Here's another example from an assignment I had in New Mexico. I was shooting at the San Ildefonso Pueblo covering a deer dance for a story about the Anasazi Indians. As I waited for it to begin, I became intrigued with the kiva (a windowless ceremonial room) in the middle of the plaza.

Shot number one shows intrigue without articulation. Clearly it's the

kiva that interests me, but what part of it? Looking at this photograph, one would have to assume that the steps were what was most exciting to me (the wide-angle lens has distorted and emphasized them all out of proportion to the rest of the picture). Next perhaps would be the "Keep Off" sign and its relationship to the people on the left. It's hard to say though, as there is nothing about the sign or the body language of the people that makes their relationship particularly interesting.

In point of fact, I had no idea what was turning me on when I took this picture. I was merely looking around, trying to get something going, and, as someone else was paying for my film, pushed the shutter release before I figured out what the photo was.

As I stood there, however, I began to look at my feelings. "Come on, Dewitt, just what is exciting you? No, it's not the stairs, the sign or the figures. It's the ele-

gant line of the kiva ladder thrusting up toward the sky." Now I had the articulation and once I had that, the technique could follow: 1) change my angle so I could see as much of the ladder as possible; 2) use a longer lens to zoom in on the kiva, clearing out all but the ladder—and a little of the roof—for both context and contrast; and 3) put on a polarizing filter to darken the background and heighten the contrast between the blue of the sky and the white of the ladder. The result? Photograph number two.

Both shots are in focus, both are correctly exposed, but one is just a snapshot and the other is a photograph. One is ordinary, the other finds the extraordinary in the ordinary.

The next time you're taking photographs, remember all three steps—*feeling, articulation and technique* (and pay special attention to *articulation*). This is one place in your life where it pays to be FAT. **OP**

H A S S E L B L A D

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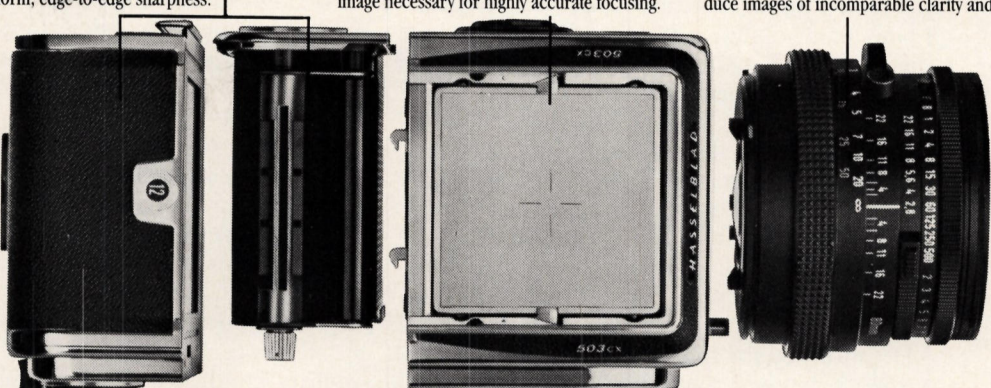
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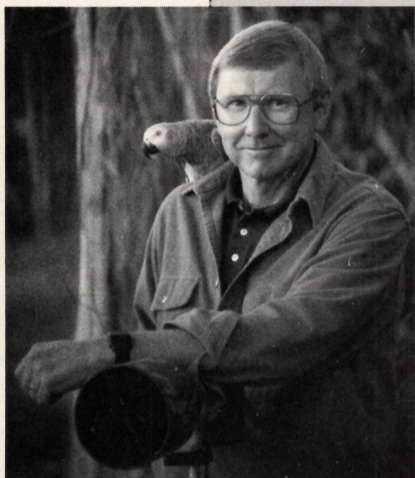


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Father Lepp's Words Of Wisdom For Trouble-Free Photography

TEXT AND PHOTOGRAPHY BY GEORGE LEPP

This is your forum—your chance to have the professionals field your questions about perplexing photography problems and provide solutions to your letter queries.

Most Common Problems

The same problems keep cropping up in the field. I've talked about them before, but I continue to see them whenever I teach a workshop, accompany a photo tour or talk to participants at a lecture. Go down this list and see if you are plagued with these same predicaments. If you can answer no to each situation, you're one squared-away photographer and the images you produce will be better for the attention you've paid to details.

1. Keep It Clean. Cleanliness is important. This isn't your father telling you to wash behind your ears, it's just me telling you that clean front and rear elements are necessary to achieve the best performance from that expensive optic. Wide-angle lenses stopped down to $f/16$ or $f/32$ and focused on a close subject will almost bring the dust on the front element into focus.

Don't forget to clean inside your camera. Now I am sounding like your father. Just last week I got hit again by the floating lint at the film plane. A small hair-like thread from a sweater or a glove got attached at the edge of the frame where the film was in focus. A perfect shadow of the thread shows up at the bottom edge of several of my images. I embarrassed myself by not catching its presence in an image before sending the transparency to a printer. I rejected the lab's print, accusing the printer of sloppy housekeeping. He informed me that the problem was mine.

With the camera on "bulb," fire the shutter, keeping the shutter button pressed down, and then open the back to examine the film opening. Check inside the camera. Be careful not to damage the extremely fragile shutter curtain. Do this examination often when you have an empty camera.

2. Know Thy Camera. Do you know all the operating procedures of your camera? Do you

carry the instruction manual in your camera bag? It contains the basic information necessary to work the camera. I think the biggest reason for problems in the field is that we haven't become familiar with the tools at our disposal.

The end result is an inability to solve a minor camera problem during the heat of a shooting session, or even worse, not being able to use the full potential of the sophisticated instrument as a creative tool. Today's cameras aren't nearly as complicated as we make them out to be. Sit down in the comfort of your home without the pressure of a shootable subject and play with the camera. Go through all the possibilities until you understand them, and then pack the instruction book in a corner of your camera bag. Sooner or later you'll be glad it's there.

I find many photographers using the new technology to make their photography easier instead of making it better. With some initiative, the new technology can help you to be more creative and to take photographs that previously were almost impossible.

3. When To Say No To Autofocus. First I say use the new technology, and now I'm going to say: Know when not to use autofocus! I had a woman in one of my workshops come to me on the first day and lambast me for recommending the new autofocus camera she had bought recently. She said that morning she had tried to take a photo of the sunrise and the camera just wouldn't focus.

The camera was desperately trying to focus on a blank sky. When the camera's autofocus ranges the lens in and out trying to find something to lock onto, just say no and switch it to manual.

Other times you will find manual focus necessary is in macro photography. Preset the magnification and move your body slowly back and forth to bring the subject into focus. Another condition autofocus has difficulty with is when you place a teleconverter on a lens and the effective wide-open aperture ends up being approximately $f/8$. The autofocus chip needs more light to function.

4. Batteries! We live and die by the battery, so always have extra batteries. I've been out in a skiff following orca whales when, sure enough, the camera battery said *sayonara*. Sure I had

extra batteries... on the big boat. A lot of good that did me as I watched the play of backlight on the blows of a large pod of whales against the dark shoreline. It's only a memory. Keep the batteries on your person.

Be aware of the effect of cold on batteries. As the temperature dips, the output of an alkaline battery plummets. Consider some of the new rechargeable NiCd batteries. They have a far greater capacity under cold conditions. These NiCds now last longer in your cameras and flashes than the old versions, recharge much more quickly, cost less in the long run, and are a positive factor in recycling.

5. Filters. I see problems associated with filters on a regular basis. The biggest problem is vignetting. A polarizer on a wide-angle lens, two filters on a lens or a filter coupled with a lens hood can cause vignetting. Most of today's SLR cameras have viewfinders that show only approximately 92 percent of what will be on the final image. This makes the slight vignetting of a filter harder to detect.

I make a habit of using filters larger than the lens' screw-in thread. I have 62mm filters for my 58mm lenses and attach them with a step-up ring. Test out your lenses with your chosen combination of filters before you head out into the field.

I notice that some photographers spend hundreds of dollars on a top quality lens with the idea of getting great sharpness. Then they buy a cheap filter that effectively destroys several hundred dollars worth of the lens' sharpness. Some cheaper polarizers might even prevent your telephoto zoom lens from focusing to infinity. Purchase only quality filters to protect your investment in sharpness.

6. Ooh, It's Dark Out There. There isn't any reason to be afraid of the dark. Pop speaks again. Most of you have TTL (through-the-lens) exposure metering for flash. Never before has flash photography been so easy and so capable a tool. It can be regularly used

to achieve macro photography with maximum depth of field and no calculations and fill lighting to augment the light in shadows that would normally be rendered too dark.

7. The Not-So-Great Outdoors. The problems of moisture, cold, heat and dust can all be addressed before going into the field. Always have a plastic bag tucked away in your camera bag, backpack or vest. Just recently my Joseph Van Os workshop at Mono Lake got surprised by a cloudburst while we were a long distance from the protection of the vehicles. Those with protective bags just got themselves wet. I also keep a small towel handy to

so hot it's difficult to pick up. Just think what that may be doing to your sensitive film. An insulated bag with reusable Blue Ice can keep cameras and film at reasonable temperatures during a hot trip.

8. Marry A Good Tripod. Are you going steady yet? I'd like to see all of you married to a good tripod. I would guess that at least a third of the participants who show up at my workshops have inadequate tripods. Can you imagine putting an expensive Nikon F4 on a shaky wobble-in-the-wind tripod? The best solution isn't inexpensive, but it is an investment that should outlast your current



keep my hands dry while I handle the equipment. The transferring of moisture, especially salt water, from your hands to the crevices of your lens and openings in the camera body is almost as bad as direct rain.

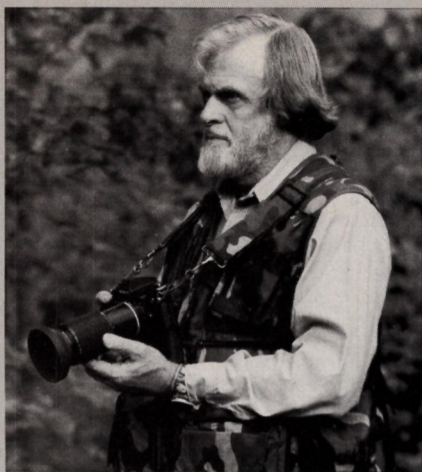
Most of today's cameras will work under all but the coldest of situations except for the failure of the power supply, the batteries. If you anticipate extended periods in sub-zero conditions, you might consider a mechanical camera body or a camera that allows the use of an external battery supply that is kept close to your warm body.

Direct sun can make a black camera

camera system and protect the sharpness already paid for in the quality cameras and lenses in your hands.

Enough admonishments. These are the basic problems and frustrations that I observe with photographers in the field. If you solve these, you'll be able to concentrate on the creative aspects of the marvelous natural subjects before you. **OP**

If you have any tips or questions, address them to: OUTDOOR PHOTOGRAPHER, Dept TT, George Lepp, 12121 Wilshire Blvd., Suite 1220, Los Angeles, CA 90025.



Wildside

Denali: Bear Heaven

There are many national parks famous for an abundance of bears to photograph...but this park is the best

TEXT AND PHOTOGRAPHY BY DR. LEONARD LEE RUE III



There's no doubt about it, the McNeil River in Denali National Park, Alaska, holds the largest concentration of bears in the world today.

Katmai, Alaska is also home to many coastal bears and is accessible to anyone who can afford to fly in. Limited camping is also available.

Glacier National Park in northern Montana undoubtedly has the largest number of interior grizzlies in the lower 48 states. (The bears have been reclassified as brown grizzlies, not only in North America but in Europe and Asia as well, but I still break them into subspecies and call them

by their original names.)

Years ago, the Great Smoky Mountains in North Carolina and Tennessee were famous for their black bears. Now, a sighting is considered rare.

Yellowstone used to be famous for its bears but since 1972, I have seen only two bears, both black.

So, back to Denali—the best place I've found to spot bear. I just spent 3½ months in and around the park and many times saw 10 to 12 grizzly bears a day. I will be the first to admit that not all the bears were within photographic distance. Denali has hundreds of bears and because they prefer the

wide-open, high, dry tundra areas, they can be seen at a great distance.

In the grassy highlands, there were no familiar trees to provide a scale by which to judge the size of the bear or to discern the distance of the bear from the viewer. If you had good binoculars, you might be able to recognize the male bear by its larger, blockier head. If you were looking through a 600mm or 800mm lens, you could read the distance on your lens when the bear was properly focused. Most confusing to identify were the two- or three-year-old bears out on their own.

(Cont'd on page 65)

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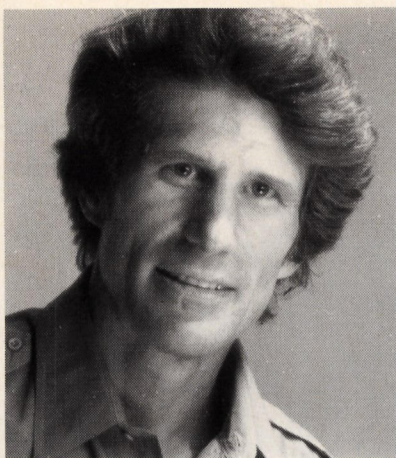


Photo Adventure

A Digital Sky

Can an irreparably damaged slide be flawlessly restored?

TEXT AND PHOTOGRAPHY BY GALEN ROWELL



A raw scan of a seriously damaged slide (right) was digitally repaired, color corrected and printed from an enlarged duplicate transparency (above).

Last year, Hoya introduced a new 4X loupe that shows the full area of a 35mm slide in sharp focus from edge to edge. I tested one alongside the quite similar 4X Schneider loupe I've been using for 20 years and couldn't see a difference. Since the Hoya is more convenient to use and considerably cheaper, I bought one to carry around in my briefcase.

I learned the hard way that both brands should carry a product warning for outdoor use. The situation never came up with the Schneider that I deemed too valuable to use outdoors. Back in the seventies, however, I used to take my Schneider to meetings with photo editors.

Quality loupes were so rare then that I often made sales to people who were as wowed by the crisp full-frame image on their light box as by the subject matter. On subsequent visits, most publications had purchased their own and many were chained to keep them from disappearing. I can't re-

member seeing anyone use either a Schneider or a Hoya loupe outdoors until one fateful day in Yosemite Valley last year.

For years, Ron Kauk and I had been talking about the ultimate Yosemite climbing photograph. If you're on El Capitan or Half Dome, you can't capture the classic contours of both rocks at the same time. Ron had cased out a situation on the face of Yosemite Falls where at the right time on a spring day a climber could be depicted on the sheer cliff with a rainbow, Yosemite Falls and Half Dome. As we climbed together, the rainbow didn't stay still for us. Normally, it was an indistinct band in the falls, but as the wind whipped the spray toward us, it would virtually surround Ron moments before we got drenched. I set my Nikon 8008S on auto, held it in one hand, and shot several rolls of film as the falls blew back and forth over us.

I rushed to San Francisco to process the slides at the New Lab, and when I returned the next day, Ron and I looked at the selects over an outdoor lunch in Yosemite Valley. Using my new loupe, he exclaimed, "Look at this one!" He chose one frame as the ultimate because it caught him in the middle of a reach with a double rainbow at full intensity. No other select was quite like it, although another frame from the same take was later chosen for a Nikon advertisement.

A climbing friend wanted to see what Ron was so excited about, so Ron held the slide with the loupe pressed against it in his outstretched hand for 10 or 15 seconds until his friend finished a bite of his sandwich, looked through the loupe, and said, "It's a real nice picture, but what's that big spot in the waterfall?"

A bright circle curled at the edges and grew larger until it dawned on me that without an eye to the loupe for those 15 seconds, the sun's rays had been perfectly focused on the emulsion of one of my all-time favorite climbing

shots. Ten years ago, the image would have been lost for quality stock sales. A hand-retouched duplicate might have worked for small use, but not for full-page enlargements. Today, the image seemed a natural for digital retouching. If *National Geographic* could move the pyramids and *TV Guide* could stick Oprah Winfrey's head on Ann-Margret's body, then putting a splash of water back into a real waterfall shouldn't be any problem.

The first company we tried patched the sky so that the damage was unnoticeable, but the resulting image had the quality of a poor slide dupe.

Excessive contrast burned out detail in Ron's white pants and blackened shadow detail. The color balance was off, and data stored at high resolution had been outputted onto a 35mm color negative that had far lower resolution than the Velvia original.

Queries about who could output the digital information onto a 4x5 transparency led us to Thurston Productions of San Francisco. Chuck

Thurston's main business is outputting data files of graphics or photos onto film. He also uses his Macintosh IIfx computer, Nikon LS 3500 scanner, and other gadgetry to digitize photos, rework data as necessary, and return the information to film. With an 8000-line field and 68 megabytes of information he could output virtually all the sharpness of the original onto a 4x5 transparency. Thurston told us that sampling the digital pattern from another part of the waterfall and painting it into the hole would be the easy part. The technology won't automatically produce a perfect replication of a transparency. Just as an automated print from your local one-hour photo shop rarely does justice to your original slide or negative, output from a digital scanner onto transparency film may require the electronic counterparts of burning and dodging, color filtration and contrast masking before it matches the original.

Thurston used an isolation mask to restore detail to Ron's white pants, as well as other tricks to selectively correct color balance

and increase sharpness. Increase sharpness? Yes. Although resolution is a measured quantity, sharpness is a perceived quality. The 24-million-pixel image would hold the high resolution that a fine lens records on 35mm film, but by using Adobe Photoshop software, Thurston could selectively increase edge definition along outlines of key subjects, thus creating a sharper appearance.

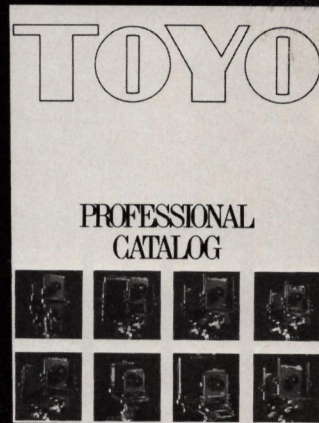
Like all good things in life, digital salvation doesn't come cheaply. It normally costs between \$350 and \$650 to repair a slide and transfer it to a 4x5 transparency, depending on the kind of damage. A decade ago, it was possible to repair damage with a million-dollar Scitex machine for reproduction in books and magazines, but not to regenerate transparencies that resembled the original at a price the individual photographer would be likely to pay to salvage top images. Now the ball is in our court to use this handy tool ethically to preserve or enhance what is really in our original images rather than to create what was never there.

OP

Ten years ago, the image would have been lost for quality stock sales.... Today, the image seemed a natural for digital retouching.

STOP

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Gadget Bag

Pentax 645



645

THE IDEAL FORMAT?

Our resident gadgeteer examines the virtues of the 6×4.5 format and surveys the leading cameras in the field

BY PETER K. BURIAN

Given the overwhelming popularity of 35mm cameras, one would expect manufacturers of printing papers to optimize sizes for reproduction of images from a 24×36mm negative. But such is not the case, and the traditional dimensions like 8×10, 11×14 and 16×20 still dominate the market. Even though we have come to accept (and indeed demand) these as the norm, they simply were not intended for full-frame printing of 35mm negatives or slides.

In fact, to transfer an entire image area to a print, some custom labs use such peculiar sizes as 6¼×10, 9½×14, 13½×20 or 16×24. These are the same proportion as a 35mm negative, but you'd be hard pressed to find any of them at your local supplier. Photographers who make their own enlargements or patronize high-volume photo-

finishers either crop larger paper sizes or accept some loss of image.

The "Ideal" Alternative

Enter the 645 cameras, producing a 6×4.5 cm (2⅝×1¾-inch) negative (or positive), just about perfect for standard enlargements. Both the horizontal and vertical ratio of the original is proportional to common print sizes, so you get a full-frame reproduction with minimal cropping. Although the 6×4.5 cm area measures almost three times that of 35mm, most home darkrooms should handle these with the addition of a suitable negative carrier.

As an added bonus, the generous area of any medium format frame requires less magnification when prints of a particular size are made. Consequently, even oversized pictures attain enviable quality, thanks to the high density of the negative or transparency. Superior resolution and ultra-fine grain make for beautiful double-page spreads or 20×30-inch enlargements with today's exceptional slow films. Impressive definition of the most intricate details and remarkable overall clarity can be taken for granted when you work with a sizeable original.

But let's be realistic and concede that not all photographers recognize 645 as the "ideal" format. Indeed, the larger 6×7 cm frame is just about perfectly proportional to standard paper

Mamiya 645 Super





Photography by Parashoot

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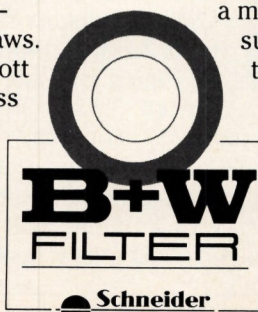
We start with a solid block of West German Schott optical glass. Each filter is diamond cut from a glass cylinder and precision ground and polished to ensure flatness on both surfaces and uniform thickness throughout.

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For a catalog or the location of the dealer nearest you, contact Schneider Corporation of America, 400 Crossways Park Drive, Woodbury, NY 11797. (516) 496-8500.





Bronica ETRSi

sizes and magazine covers. Then too, 6×7 exceeds the “miniature” 35mm format by a full 500 percent, allowing for huge blowups of gallery quality, right up to 30×40 inches. And

proponents of the more prevalent 6×6 cm (2½ square inches) cameras will be quick to point out the advantages of their choice as “ideal.” Granted, its large square frame is the optimal shape for cropping to either a horizontal or vertical.

There’s no denying the validity of these points. But consider this fact: Most manufacturers of 6×7 and 6×6 SLRs offer optional film backs or reducing magazines to convert to 6×4.5 cm images. While this does not resolve the debate as to the relative merits of each, it’s well worth considering the benefits of the 645. These include a highly efficient frame size, an appreciable edge in reproduction quality (over 35mm) and more pictures per roll than other medium formats.

Let’s not ignore the relatively modest size and weight of the 645 either, which makes it highly amenable to outdoor and travel applications—hiking, boating or shooting out of small aircraft, for example. These days, most every modern convenience is either integrated or available as an option on most models; only autofocus capability is still beyond reach of those considering this format. Let’s take a look at the SLRs currently available for producing 6×4.5 cm images with 120 and 220 roll films.

Fujica GS 645 S



The Pentax Multi-Mode 645

For those who demand a camera with the responsiveness and handling attributes of 35mm, Pentax created a multi-talented 645. Unlike modular systems we’ll survey, this one is fully integrated, with all functions in one ready-made package. Aimed at photographers who value the convenience of a 35mm SLR, the Pentax 645 makes the transi-

tion with a model that handles much like its smaller counterparts.

Built specifically for hand-held, eye-level work, this one sports a low-profile pentaprism, full information viewfinder plus a comfortable grip in a lightweight and compact body. It’s a fully programmed, multi-mode SLR with seven electronic exposure modes and fast-access controls for operation similar to that of smaller format SLRs. A built-in film winder (to 1.5 fps) makes it the camera of choice for some motor sports photographers or anyone who values its attributes in fast-paced action work.

The Pentax 645 is also applicable to serious, thoughtful work, as evidenced by its depth-of-field preview, cable release receptor, two tripod sockets, and multi-exposure capability. Aperture and shutter-priority allow for controlling depth of field or depiction of motion, while exposure compensation and full metered manual provide total control over creative factors.

Need extra illumination? Auto flash offers TTL metering even off-camera, without bothersome calculations or guesswork. Although synched at a slow ⅓ sec. (or longer), creative possibilities can be expanded with one of the leaf-shutter lenses. Either the SMC Pentax 75mm or 135mm optics allow for flash sync at any shutter speed from ⅓ to ⅓, useful for producing a broad variety of effects, indoors or out.

Pentax supports this camera with 12 SMC lenses worthy of the distinguished reputation of its maker, Asahi Optical Co. These range from an ultrawide 35mm *f*/3.5 to a 600mm *f*/5.6 super telephoto, and include a zoom, the 80–160mm *f*/4.5. The 1.4X teleconverter for the extra “reach” needed by wildlife and sports photographers is also available. These lenses provide a wide range of creative tools for numerous endeavors, but you can also use most Pentax 6×7 lenses with an adapter. Then, this camera becomes an appropriate backup if conditions preclude the use of its more cumbersome cousin.

Although there are no interchangeable film backs, inserts can be preloaded and popped in quickly at the end of a roll for continued shooting when light is rapidly changing. Pentax markets holders for 120 and 220 films (15 and 30 exposures), and even a 90-exposure 70mm insert to increase the versatility of this field camera. Add some of the numerous accessories for macro photography, and the Pentax 645 will fit the bill of the most discriminating outdoor photographer. With handling ease similar to 35mm, plus the superior image quality of the 645 format, this SLR combines the best of both worlds.

The New Generation Mamiya

Not to be outdone, Mamiya, the pioneer of the 6×4.5 cm format, presents the modular M645 Super. A strong contender for the affections of the serious photographer, its size is comparable to the pro 35mm SLRs, and this robust but lightweight camera was designed to handle just as easily and quickly. Full exposure control, mirror lock-up, multi-exposure capability and interchangeable components enable the M645 Super owner to exercise his or her creative vision.

For the greatest utility in outdoor photography, equip this SLR with the AE prism finder for an unreversed eye-level image. You can gain aperture-priority TTL metering with AE lock and exposure compensation, besides conventional manual control with match diode metering. Select either spot or average metering, or leave the decision up to the evaluative system in tricky lighting conditions. This will switch between the two, activating the optimum pattern depending on contrast between the primary subject and its surroundings.

A handgrip with hot-shoe allows for a secure and stable grasp with film advanced by a single turn of the crank. For action work, consider the Power Drive for 1.2 fps film transport for continuous shooting at eye level. Film backs are available for 120, 220, 35mm rolls and Polaroid packets. Changing formats can be accomplished in seconds; you're free to switch in mid-roll from color to black-and-white, or from negative to slide films, without risk of accidental exposure of remaining frames. A full complement of macro accessories, focusing screens, plus electronic auto-flash round out the M645 Super line.

All this would be of merely academic interest without first-class optics. Mamiya delivers with an extraordinarily wide range of 18—from ultrawide (35mm f/3.5) to super telephoto (500mm f/5.6), matched 2X converter, three convenient zooms, plus fish-eye macro, soft focus and shift lenses. There's also the 70mm f/2.8 for flash sync at all shutter speeds from 4 to 1/1000 sec.; it allows for a variety of effects not possible at the usual 1/60 sec. sync of the focal plane

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*Galen Rowell
Photographer*

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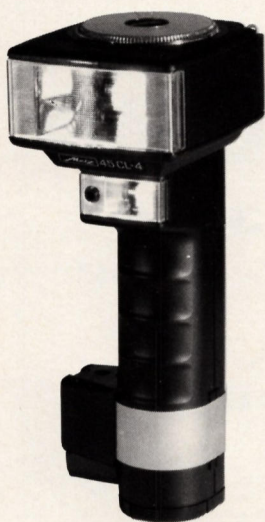
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Gadget Bag

shutter. Renowned for pro-caliber results, Mamiya-Sekor optics make the M645 Super a well-respected player in a hotly contested market.

The Bronica 645 Concept

Entering the ring with its third-generation 645 camera, Bronica challenges competitors with the sophisticated ETRSi model. This recent upgrade boasts a silicon photo diode cell for off-camera TTL flash capability and mirror lock-up for vibrationless high magnification work. Like most other medium format SLRs, this one is of modular design; finders, film backs and focusing screens can be matched to individual preferences.

Switch the waist-level finder for the AE-pentaprism and gain aperture priority AE with TTL metering in addition to full manual control. Shutter speeds and over/under exposure warnings are displayed inside the finder, providing necessary data for eye-level work. Slip on the Speed Grip to replace its film wind crank and get thumb-operated advance instead. Better yet, add the Motor Winder and gain 1 fps transport, allowing concentration on the subject while the action unfolds. Though not exactly a bantamweight in this configuration, the customized ETRSi is now prepared for a multitude of outdoor exercises with handling ease and splendid balance.

Choose from among several interchangeable film backs for 120 or 220 roll film, wide or standard 35mm format, or Polaroid back for previewing the intended image. These can be switched in mid-roll, a feature appreciated by Zone System aficionados and anyone who wants to shoot several formats or film types. This versatility without the burden of extra cameras, changing bag or hassle of rewinding and reloading in the field is invaluable.

To keep the camera compact, the ETRSi's Zenzanon lenses incorporate an electronic Seiko lens shutter system with depth-of-field preview. Flash will sync at all shutter speeds right up to the fastest $\frac{1}{500}$ sec., great for fill-in or subjects in motion on bright days. Signals received from the camera's circuitry open and

close sectors inside the lens barrel for precise exposure results. Choose from among the 11 highly rated E series lenses ranging from 40mm wide angle to 500mm telephoto and 125-250mm $f/5.6$ zoom. Add the 2X teleconverter, macro accessories and cable release and the ETRSi becomes as useful in natural environment as in the confines of a studio setting.

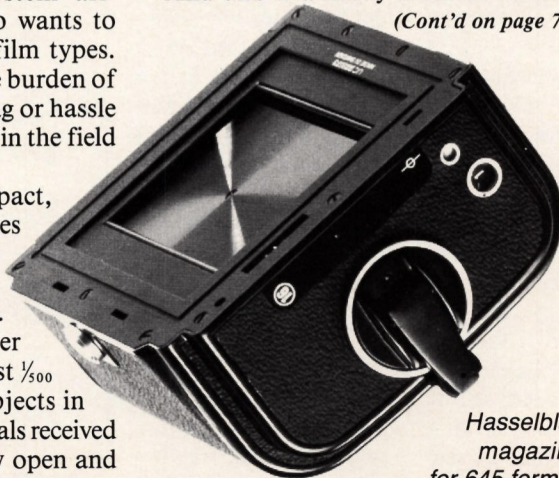
Fujica's Wide-Angle Alternative

All cameras surveyed are SLRs with through-the-lens viewing for critically precise framing with their entire line of optics. Bucking the trend is Fujica with a distinctive concept—a rangefinder camera with fixed wide-angle lens on a rugged polycarbonate body for 6×4.5 cm frames exclusively, with 120 and 220 films. The GS 645S, the low-price leader among the current crop, is just right for scenic or street photography when you're traveling light. Thankfully, the sharp 60mm $f/5.6$ lens if rangefinder-coupled; this feature assures accuracy in focus and framing with parallax self-correction.

No fancy electronic gadgets here, but you'll notice a hot-shoe and PC socket for flash sync at any speed from 1 to $\frac{1}{500}$ sec. Metered manual with match diode LED readouts offers accurate and consistent results with a familiar center-weighted pattern. Should its battery fail, this fully mechanical camera will keep working at all shutter speeds, though without metering guidance.

Even though you won't find interchangeable film backs or lenses for the Fujica, its price is certainly right! And this is a hardy medium format

(Cont'd on page 73)



Hasselblad
magazine
for 645 format

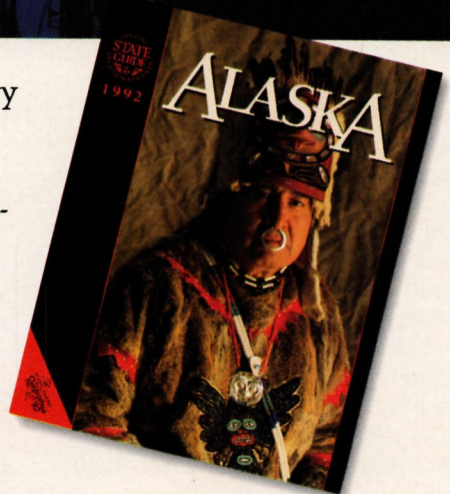
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Nature's BIG 20

Timing is everything, especially in photography. Use this quick reference for great image locations.

BY J. MICHAEL WYATT

Before days were measured by the sweeping hands of a clock and seasons were bound in the pages of a calendar, humans moved to the subtle rhythms of nature's beat.

Today, caught in the head-down rush of modern life, we rarely hear the tick of nature's clock. But nature still taps out the rhythm. Months ago, the shortening days of fall urged snow geese to journey south. Across the deserts of the Southwest, winter rains are already falling. They will flood the spring with blooms. Later, when summer comes high to the snowbound flanks of mountains, the warming air will again open the icy hearts of glaciers.

In this article, we present 20 events drawn from the best of nature's annual phenomena. From the airborne spectacle of 750,000 shorebirds to the silent struggle of a single hatching sea turtle, they form a photographer's wish list of wonders large and small. We've taken care to choose events at accessible locations throughout the United States (and one in Canada). Each is within reach, some are only hours from large cities, but all offer the opportunity to observe and photograph the grand moments that mark the seasons.

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Photo by Whit Bronaugh

Nikon F3, 105mm Micro-Nikkor, Fujichrome Velvia, 1/2 sec. at f/16

CALIFORNIA: DESERT WILDFLOWER BLOOM

The California Desert is home to more than 700 species of flowering plants. At the peak of the spring bloom you can expect to find as many as 120 species in flower. The blooms are usually split equally between annuals and perennials. Because they complete their life cycles in a single growing season, annuals are found in greater variety

and abundance in the desert than in any other ecological community. They make urgent use of the desert's meager water supply, rushing from seed to flower shortly after the winter rains.

Location: Joshua Tree National Monument, Riverside County, Calif. (60 miles east of San Bernardino).

Best Time: The bloom is dependent upon the frequency and intensity of winter rains. If significant rainfall occurs in January, a bloom usually begins in February and lasts from six weeks to three months.

Weather: Clear skies with daytime highs in the 60s and 70s; nighttime lows in the mid-50s.

The Photo Experience:

“Desert wildflower blooms can be very patchy—both in time and location,” cautions Whit Bronaugh. “One valley might have a profusion of flowers while the next has hardly any at all. To make best use of your time, plan ahead and call ahead.” Bronaugh uses a 105mm Nikkor for close-ups. To isolate a subject against an out-of-focus background he uses focal lengths up to 300mm. A tripod is essential. “I’ll take one to two hours to photograph one situation. I want the image to be tack-sharp, so I’m very careful to position the tripod and camera for maximum depth of field.

“I like soft light. That means shooting on overcast days or using an umbrella to soften direct sunlight. I often shoot one- to two-second exposures and any wind at all will wreak havoc. So I take my time and wait for the right moment to trip the shutter.

Bronaugh’s Best Tip:

“Patience and perseverance. Flowers won’t walk away, so take your time. Look past the dazzling color of a flower and consider the other details that make a great shot. Say you’ve found a small flower in a sandy area. If you keep looking you might find the same bloom in a location where the entire frame is filled with rock—an interesting contrast with the delicate blossom.”

For more information, contact: Joshua Tree National Monument, 74485 National Monument Dr., Twentynine Palms, CA 92277, (619) 367-7511.



Photo by Art Wolfe

Nikon F3, 200–400mm Nikkor zoom, Fujichrome 100, 1/125 sec. at f/8

MONTANA: MOUNTAIN GOAT KIDDING

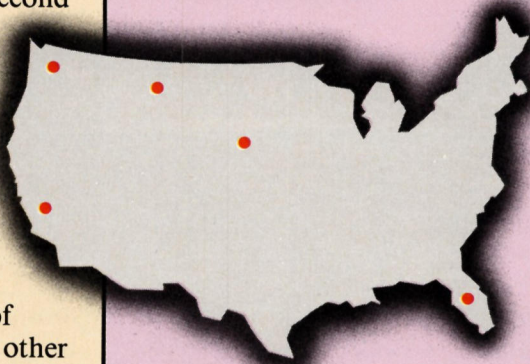
Each spring, throughout the high country of the Rockies, mountain goats are born. By late spring, the active and increasingly independent kids make excellent photo subjects.

Location: Glacier National Park, Montana.

Best Time: June and July.

Weather: Highs average 80 degrees F; cool nights, frost is always a possibility.

For more information, contact: Glacier National Park, West Glacier, MT 59936, (406) 888-5441.



WASHINGTON: MIGRATORY SHOREBIRDS

This small, 450-acre wetland attracts the highest concentrations of shorebirds ever recorded.

Location: Bowerman Basin National Wildlife Refuge is located at the north-eastern corner of Grays Harbor, one-half mile west of the town of Hoquiam.

Best Time: Mid- to late-April—usually around April 24.

Weather: Mild with highs in the mid-50s and lows in the low 40s. Be prepared for rain.

For more information, contact: Washington State Department of Wildlife, 905 E. Heron, Aberdeen, WA 98520, (206) 533-9335.

• • •

FLORIDA: SEA TURTLES

From April through August Atlantic loggerhead turtles nest on sandy beaches along the coasts of Virginia, the Carolinas, Georgia and Florida.

Location: Sebastian Inlet State Recreation Area, Florida (80 miles southeast of Orlando).

Best Time: June and July.

Weather: Highs in the mid-80s and lows in the high 60s.

For more information, contact: Florida State Department of Natural Resources, Division of Recreation and Parks, 3900 Commonwealth Blvd., Tallahassee, FL 32399-3000, (904) 488-7326.

• • •

SOUTH DAKOTA: BISON CALVING

Bison calves are born each spring, usually one to a cow, weighing 25 to 40 pounds with tawny, pale red fur.

Location: Sage Creek Basin, Badlands National Park, South Dakota.

Best Time: Calves are born from April through June.

Weather: Expect rain in April and May. April highs in the upper 60s, lows in the high 30s; June highs in the 80s and lows in the 50s.

For more information, contact: Badlands National Park, P.O. Box 6, Interior, SD 57750, (605) 433-5361.



Photo by Scott Wellsandt

Rollei 6006, 80mm Planar, Fujichrome 100, 1/125 sec. at f/11

WASHINGTON: ICE CAVES

The ice caves begin to form in Mount Rainier's Paradise Glacier each summer when tiny passages beneath the glacier are cut by warm trickles of melted ice and snow. As the diameters of the passages grow larger, warm air joins the flow of melting water and the rate of growth accelerates. By early September the caves enter the final stages of their brief lives. As the diameter of the caves increases, the area exposed to melting and evaporation also increases and the processes that created the caves destroys them.

Location: Paradise Glacier is on

the southeast side of Mount Rainier in Washington's Rainier National Park.

Best Time: Late July through September. Check with rangers for current conditions.

Weather: Variable. Average daytime highs in July and August can reach the 90s, dropping to the mid-60s in September. Summer lows in the 40s usually drop to the 30s in September.

The Photo Experience: Scott Wellsandt reports that the six-mile round trip hike from Paradise Inn to the caves is one of his favorite short trips in the region. "It's a

microcosm of the mountain—an alpine meadow, wildflowers, marmots, snowfields, a glacial moraine—ending with the cool blue of ice caves," says Wellsandt. "The glacier's ice fills the caves with a pearlescent blue glow. Daylight penetrating the ice from above is quickly stripped of its red wavelengths, leaving the cooler end of the spectrum intact. On a sunny day when there is little snow cover on the glacier, the caves come alive with a brilliant blue light shining from the ceiling and walls."

To travel light, Wellsandt keeps his equipment to a minimum, carrying



Photo by John Smith

Nikon F3, 105mm Micro-Nikkor, Kodachrome 64, 1/60 sec. at f/16

WEST VIRGINIA: RIPENING BERRIES

Blueberries and huckleberries are scattered throughout the heath barrens and boulders of Dolly Sods. Cranberries, insectivorous sundews and a number of plant species more commonly encountered in wetland areas far to the north can be found in the region's bogs.

Location: Dolly Sods, Monongahela National Forest, West Virginia.

Best Time: Mid-July to mid-August for blueberries and huckleberries; October for cranberries.

Weather: Unpredictable. Storms can be severe; fierce westerly winds, rain, fog and snow can occur.

For more information, contact: District Ranger, Potomac Ranger District, U.S. Forest Service, Rt. 3, Box 240, Petersburg, WV 26847, (304) 257-4488.

• • •

NEW HAMPSHIRE: ARCTIC BLOOM

This unique 300-acre parcel of rocky alpine tundra is home to more than 60 species of flowering arctic plants whose major range is more often found far to the north in Labrador, Newfoundland, and the Arctic.

Location: Mount Washington, White Mountain National Forest, New Hampshire. Alpine Gardens sits about 1000 feet below the summit on Mount Washington's eastern side.

Best Time: June 5 to 15.

Weather: Unpredictable. Be prepared for anything from snow to sun.

For more information, contact: White Mountain National Forest, 719 Main St., Laconia, NH 03246, (603) 528-8721.

• • •

HAWAII: SILVERWORD BLOOMS

The silversword plant blooms once and dies after growing for up to 20 years. Flower stalks extend to a height of three to eight feet and are covered with up to 500 yellow and reddish-purple flower heads.

Location: Haleakala National Park, Maui, Hawaii.

Best Time: August.

Weather: Usually warm and dry, but be prepared for rain accompanied by wind and cool temperatures.

For more information, contact: Haleakala National Park, P.O. Box 369, Makawao, Maui, HI 96768, (808) 572-9306.

• • •

ALASKA: CARIBOU MIGRATION

Each year, the 170,000 animals of the porcupine herd range across much of Alaska's 18-million-acre Arctic National Wildlife Refuge as they move from the winter protection of boreal forests to the coastal plain and back again.

Location: Arctic National Wildlife Refuge, Alaska.

Best Time: The largest groups of caribou usually travel in early July.

Weather: Cool and foggy along the coastal plain. Freezing rain or snow are possible.

For more information, contact: Arctic National Wildlife Refuge, 101 12th Ave., Box 20, Room 266, Fairbanks, AK 99701, (907) 456-0250.

a Leica M3 with a 21mm f/3.4 Super Angulon, a 90mm f/2 Summicron and a tripod.

Wellsandt's Best Tip: "Be very careful in and around the caves. The Park Service discourages entering the caves because large pieces of ice can slough from the cave walls without warning. It's not a bad idea to shoot from the outside with a telephoto lens rather than expose yourself to the risk of entering the caves."

For more information, contact: Mount Rainier National Park, Tahoma Woods Star Route, Ashford, WA 98304, (206) 569-2211.

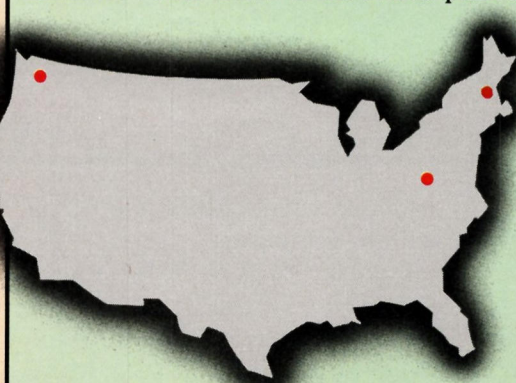




Photo by Lynn Rogers

Nikon F3, 600mm Nikkor, Kodachrome 64, $\frac{1}{500}$ sec. at $f/4$

MINNESOTA: HAWK MIGRATION

Each autumn more than half the species of hawks in northern regions of North America take to the air. These flights, often to destinations as far away as South America, provide what is perhaps the most spectacular and certainly

the most widely accessible of all wildlife migrations.

From locations like Hawk Ridge, a nature reserve on the north shore of Lake Superior, thousands of hawks an hour may be seen. More than 19 species, including pere-

grines and gyrfalcons have been sighted at the ridge. The season's first arrivals—kestrels, broad-wingeds and sharp-shinned—begin to pass in mid-August. The season lasts until December when the closing flights of eagles, red-

taileds and northern goshawks pass.

Location: Hawk Ridge Nature Reserve, near Duluth, Minn.

Best time: September to mid-October. Daily counts can range into the tens of thousands in mid-September.

The Photo Experience: Lynn Rogers' favorite lens is a 600mm telephoto.

"You're perched at the edge of a steep hill—there are hawks flying above you, beside you and below you. But most of the big hawks remain high overhead." If the birds are moving close to his perch, Rogers switches to a 300mm f/2.8. He always uses a tripod with a heavy ball-head: "I find that it lets me pan easily and follow the movements of the birds."

Rogers cautions to be careful when figuring exposures for birds in flight: "Open up one to two stops from a reading off your hand."

Rogers' Best Tip: "Wait for northwesterly winds. The hawk migrations usually begin a few days after the passage of a storm when the combination of low pressure and a cold front create strong winds—a free ride with lots of updrafts. Because hawks are reluctant to fly out over a large body of water, the winds force the birds down toward the lake's shore. They funnel along 100 miles of shoreline and concentrate at the ridge, where they fly around the tip of Lake Superior."

Rogers also notes that the wind's speed also plays an important part in producing large flights of hawks: "Speeds of between 10 and 20 miles per hour are best."

For more information, contact: Hawk Ridge Nature Preserve, c/o Biology Department, University of Minnesota, Duluth, MN 55812.



Photo by Natalie Fobes

Nikon F3, 15mm Nikkor, Aquavision housing and a SubSea flash, Kodachrome 64, 1/30 sec. at f/8

BRITISH COLUMBIA: SOCKEYE SALMON

With numbers peaking at two to three million fish, the Adams River is home to the largest salmon run in North America.

Location: Roderick Haig-Brown Recreation Area, Adams River, British Columbia, Canada.

Best Time: The sockeye runs peak on a four-year cycle, with a sub-dominant run the year after and small runs the other two years. The next peak will be in 1994, occurring from early October until the beginning of November—peaking in mid-October.

Weather: Mild with highs in the 60s and lows in the 30s.

For more information, contact: Ministry of Parks, Thompson River District Office, 1265 Balhousie Dr., Kamloops, British Columbia, Canada V2C5Z5, (604) 828-4494.

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COLORADO: ELK BUGLING

The shortening days of autumn trigger

a hormonal surge that begins six weeks of unabashed bellowing and quarreling when elk bulls are driven to gather a band of cows.

Location: Rocky Mountain National Park, Colorado.

Best Time: Mid-September through

the third week in October.

Weather: High temperatures in the 60s and lows in the 30s. Snow is possible.

For more information, contact: Rocky Mountain National Park, Backcountry Office, Estes Park, CO 80517-8397, (303) 586-4459.

• • •

NORTH CAROLINA: MUSHROOMS

Nearly 5000 of the more than 7000 species of fungi that produce mushrooms can be found in the United States. In the eastern states, mushrooms are found between the summer rains and winter cold.

Location: Cataloochee Cove, Great Smoky Mountains National Park, North Carolina.

Best Time: September and October.

Weather: Mild with some rain, temperatures in the 50s to 70s.

For more information, contact: Great Smoky Mountains National Park, Route 2, Box 573, Gatlinburg, TN 37738, (615) 436-5615.

• • •

WASHINGTON: ALPINE FALL FOLIAGE

Beginning with the first frost each September, the oranges, reds and yellows of autumn boldly announce the end of the brief alpine summer.

Location: Cascade Pass/Sahale Arm, North Cascades National Park, Washington.

Best Time: Early September to early October.

Weather: Lows in the 40s, highs in the 60s, rain always possible. Snowfall begins in late October.

For more information, contact: Mount Baker Ranger District, 2105 Highway 20, Sedro Woolley, WA 98284, (206) 856-5700.



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Photo by Michael Baytoff

Nikon F4, 180mm Nikkor, Fujichrome Velvia, $\frac{1}{30}$ sec. at $f/2.8$

NORTH CAROLINA: SNOW GEESE

Each fall, the snow geese take to the air in a 2500-mile journey from breeding grounds in the high eastern Canadian arctic to wintering grounds along coastal salt marshes from New Jersey to North Carolina. The geese travel in flocks varying in size from 35 to several hundred. More than 300 bird species pass through the Pea Island National Wildlife Refuge each year. They include 30 migratory waterfowl, including pintails, American widgeons, black ducks, mallards, green wing teals, greater and lesser scaups and mergansers. The region is the southernmost wintering area for the greater snow

goose and nesting black ducks and gadwalls. On a peak day in winter, 15,000 ducks, 4000 to 5000 snow geese and 2000 Canadian geese will be present.

Location: Pea Island National Wildlife Refuge, Hatteras Island, North Carolina.

Best Time: Mid-November through the end of December.

Weather: Winter temperatures average in the 40s and low 50s with northeast winds of 10 to 20 mph. Rain is common.

The Photo Experience: "The most important factor here is light," Michael Baytoff says. "The first two or three hours after sunrise and

the hours before and after sunset are the best times for photographing the geese. My favorite time is just after sunset. Because the geese are bright white you can get away with shooting in low light—light that allows you to incorporate the sky's reds, blues and purples."

He uses a Nikon F4 equipped with a 600mm $f/5.6$ Nikkor and a monopod to get as close as possible. "Besides, the 600 is about half the weight of my 300 $f/2.8$," Baytoff says.

Baytoff finds the monopod more versatile than a tripod. "I can crawl with the monopod strapped to my chest. It's a little trickier to hold the

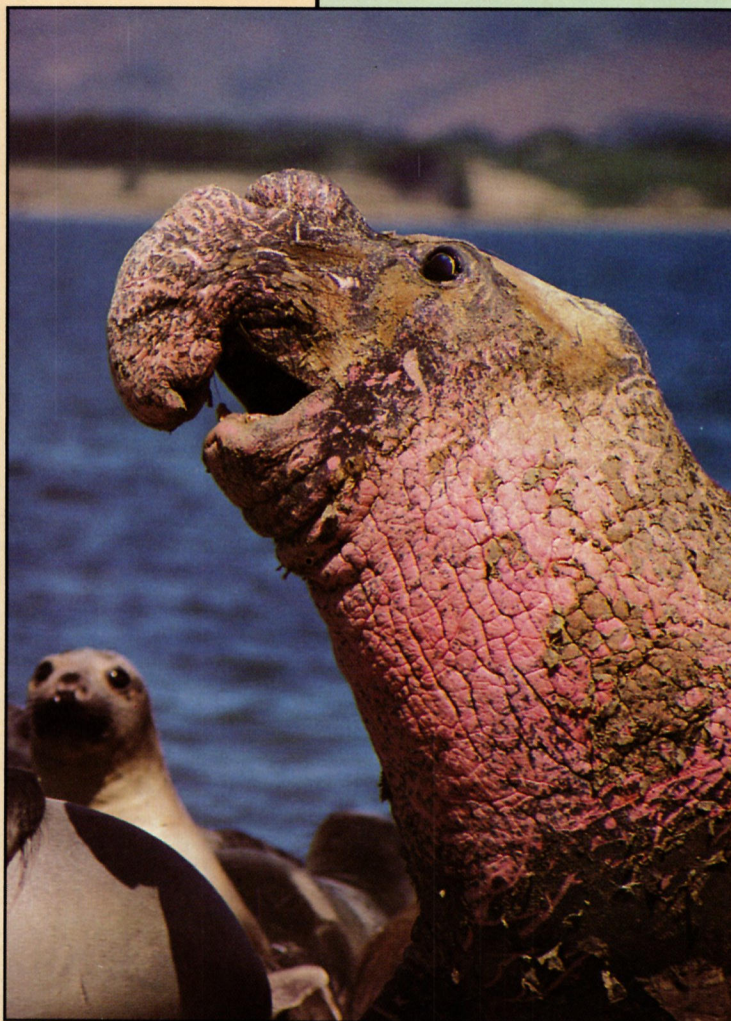


Photo by Tim Thompson

Nikon FE 2, 75-250mm Tamron zoom,
Kodachrome 64, 1/250 sec. at f/5.6

IDAHO: TRUMPETER SWANS

Each winter, the resident population at Harriman State Park is joined by migratory birds from central Canada, swelling the number of swans to more than 500.

Location: Harriman State Park, Idaho. Located on the floor of an ancient caldera about 65 miles north of Idaho Falls.

Best Time: Migration occurs from mid-January to mid-February.

Weather: Five to six feet of snow and temperatures as low as minus-60 degrees F are common.

For more information, contact: Harriman State Park, Highway Carrier 66, Box 500, Island Park, ID 83429, (208) 558-7368.

• • •

WASHINGTON: GRAY WHALES

Each year gray whales travel 5000 miles from the Bering and Chukchi Seas to the shallow subtropical lagoons of the Baja Peninsula where they will breed and give birth.

Location: Coastal section, Olympic National Park, Washington.

Best time: November.

Weather: Temperatures in the 30s to 40s, major storms possible.

For more information, contact: Mora Ranger Station, Highway Carrier 79, Box 170, Forks, WA 98331, (206) 374-5460.

• • •

FLORIDA:

WINTER WILDFLOWERS

Among the blooms you'll find in this 716,000-acre preserve are fleabane, yellowstar, milkwort, marsh pink and large flower flax.

Location: Big Cypress National Preserve, south-central Florida, 45 miles west of Miami.

Weather: Afternoon thunderstorms with daytime highs in the 80s and lows in the 50s.

Best Time: February and March.

For more information, contact: Big Cypress National Preserve, Star Route Box 110, Ochopee, FL 33943, (813) 695-2000 or Oasis Ranger Station, (813) 695-4111.

long lens steady, but the trade-off in mobility is worth it."

He points out that it's very important to approach the birds with great caution and patience. "It's a very slow process. If you spook one or two birds, you'll spook the whole flock. Dress in muted tones that blend with the background. Use available cover and move slowly and deliberately."

Baytoff's Best Tip: "Remember you're shooting white subjects. Don't trust your camera's averaging meter when taking a reading off a large group of snow geese—you'll end up with an underexposed image. Use a gray card or a reading off your hand."

For more information, contact: Pea Island National Wildlife Refuge, P.O. Box 1969, Manteo, NC 27954, (919) 473-1131.

CALIFORNIA: NORTHERN ELEPHANT SEALS

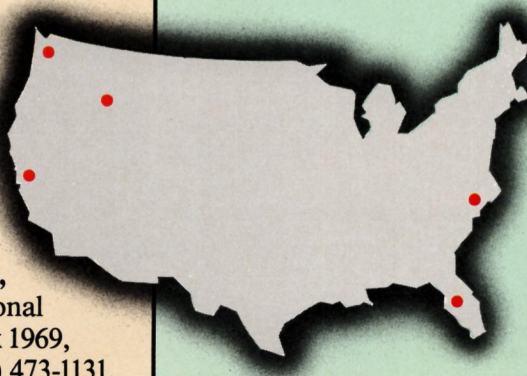
More than 100,000 elephant seals breed on coastal beaches from Baja to Northern California.

Location: Ano Nuevo State Reserve, 55 miles south of San Francisco. Reservations required, call Mistix at (800) 444-7275.

Best Time: January and February.

Weather: Cold, wind and rain likely.

For more information, contact: Ano Nuevo State Reserve, New Year's Creek Rd., Pescadero, CA 94060, (415) 879-0595.





The Spirit Of **ALASKA**

Japanese photographer
Michio Hoshino took one look at a
photo of an Alaskan village
and knew he had found his life's work

BY DOUGLAS YATES
PHOTOGRAPHY BY MICHIO HOSHINO

For a 17-year-old Japanese boy living in the heart of Tokyo, the photograph of an Eskimo village on the northwest coast of Alaska held a foreign attraction he found fascinating. The image of Shishmaref, a collection of gray, weathered houses anchored between the arctic sky and the wind-swept Chukchi Sea, left an indelible mark in the mind of Michio Hoshino.

It was this photograph, appearing in *National Geographic* magazine, that focused



A RIVER OF CARIBOU: A post-calving aggregation of caribou heads over the Arctic National Wildlife Refuge (ANWR) to escape the misery of mosquitoes. At the windy coast, they will find some sanctuary.

50mm f/2.8, Kodachrome 64, $\frac{1}{500}$ sec. at f/14

The Spirit Of Alaska

Clockwise from right:

JUMBO AT JUNEAU: Hoshino spent days fighting bad weather. This morning dawned clear and calm, and the photographer was rewarded with a breaching humpback.

180mm *f*/2.8, Kodachrome 64, $\frac{1}{2000}$ sec. at *f*/2.8

DINNER AT DENALI: A moose feeds on water weeds in the late evening at Wonder Lake, Denali National Park. Only the sound of water dripping from the moose disturbed the tranquility.

600mm, Kodachrome 64, $\frac{1}{125}$ sec. at *f*/4

EASY DOES IT: After working with this grizzly bear at Katmai National Park for several days, Hoshino moved in for an hour of shooting at very close range. He watched closely for signs of the bear's unease, but all went well.

600mm, Kodachrome 64, $\frac{1}{250}$ sec. at *f*/5.6



THE LITTLE FOXES (above): Two arctic fox cubs play while awaiting the return of their foraging mother from the ANWR. They allowed Hoshino a close approach.

300mm *f*/2.8, Kodachrome 64, $\frac{1}{250}$ sec. at *f*/4







The Spirit Of Alaska

GRAB SHOT OF THE GODS (opposite, top): While on a trip to capture fall color in Denali National Park, Hoshino woke up at the crack of dawn to find this spectacular view. He scrambled for his gear and made the shot just before the color faded.

24mm, Kodachrome 64, $\frac{1}{15}$ sec. at $f/2$

FROZEN LIGHTS (opposite, bottom): Minus-40 degree weather at two in the morning was worth braving to capture the aurora borealis, far from the city glow of Fairbanks.

24mm, Kodachrome 200, 15 sec. at $f/2$

BIG SKY TREK (below): A grizzly sow and three cubs feed on spawned-out salmon at sunrise, just prior to denning up for the winter in Katmai National Park.

50mm, Kodachrome 64, $\frac{1}{250}$ sec. at $f/2.8$



The Spirit Of Alaska

Hoshino's attention on Alaska. Within weeks he wrote to the mayors of six coastal villages asking for assistance and an informal invitation.

The next year, during the summer of 1972, he traveled to Shishmaref. Despite the language barrier (Hoshino didn't speak Inupiat or English), the villagers accepted him as one of their own. His racial features so closely matched those of his Eskimo hosts that the people originally thought he was a visitor from another coastal village. Shishmaref's welcome validated Hoshino's conviction that the land and culture spoke to him personally.

Back in Japan, he entered Keio University and in 1975 graduated with a degree in economics. After receiving his diploma, Hoshino was the only member of his class who didn't join a corporation, get married and start a family. His passions remained Alaska and photography. Later that year he returned to the state, eager to adopt a second homeland.

In Fairbanks, Hoshino sat in on

wildlife biology classes at the University of Alaska. Parasitology, habitat capacity, prey/predator dynamics, and subsistence values of the state's large mammals provided rich veins of practical information. A shared interest with fellow students (later to become government biologists) created personal friendships that continue to give Hoshino access to as well as informed perspectives on wildlife management issues.

Bob Weeden, professor emeritus in wildlife biology at the University of Alaska, Fairbanks, remembers Hoshino as a student with more than the usual amount of love for animals. "He has the eye of an artist and the determination to put in the long hours under incredible conditions to show us a sensitivity that captures the trust in the eye of a moose.

"The Japanese have an intense love of nature, but it is usually very controlled and organized. Michio's talent is like a random lightning strike—there's no accounting for it. His gift

translates an animal kinship for all of us to see," says Weeden.

Hoshino claims, "The very best picture is one that provides meaning and variation to as many different people as possible. It must speak to the child as well as the elder who has seen a full life."

Shy smiles and quick eyes flash as Hoshino considers his words. Still not entirely comfortable in English, speaking is a process of concentration and choice. I imagine him using the same converging perspective to gauge the distance to a moose, while checking the light, wind, equipment and half a dozen other contingencies involved in creating an image of lasting value.

"Conveying real information is the path," says Hoshino. "The seduction and impact of back lighting can take your breath away. A glowing halo of light, graphic shapes, form and line can make a startling image, but the individual animal is lost to black. As a photographer, I see the situation



500 5.6



500 5.6



500 5.6

SOMETIMES, YOU HAVE BEARLY

developing and the viewer discovers it as the page is turned."

Hoshino admits that "front lighting usually doesn't have the impact of dramatic back lighting, but it provides more information. It can be appreciated longer, approached and understood more successfully."

While a student, Hoshino apprenticed part-time to Kojo Tanaka (one of Japan's most famous wildlife photographers), gaining on-the-job skills and a sense of personal commitment to his passion. Claiming to have never considered photography a career or a pursuit to fame, Hoshino says, "It was something I had to do. Alaska is my lifework."

Uncomfortable talking about technical details and the newest equipment, Hoshino offers that he uses both Nikon and Olympus cameras. His lenses range from 24mm to 800mm, and he shoots both Kodak and Fuji film. It's quickly apparent that he'd rather be in the field exposing film than chatting about it.

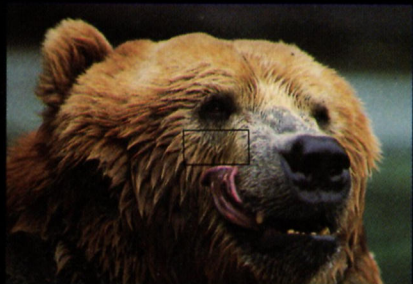
Companions who accompany the photographer into the bush reveal another aspect of this pragmatic, yet awe-struck Japanese. Toting a Sony Walkman with headphones, Hoshino prefers the pace of Mozart and Bach, with a sprinkling of Vivaldi. Traveling by air with bush pilots is the only way to get to most of the points circled on a dozen of Hoshino's well-thumbed topographic maps. For this photographer, flying in small planes is the gauntlet he runs to reach Eden. Chronically unaccustomed to mountain turbulence, each flight means at least a sour stomach.

The great caribou migrations between northeast Alaska and Canada are at the heart of a modern dilemma. Multinational corporations want to explore for oil along the coastal plain of the Arctic National Wildlife Refuge. Athabascans and Eskimos who live there and a national coalition of environmental groups want the coastal plain to remain a birthing sanctuary for the Refuge's caribou herds.

Hoshino has traveled with the herds, camped at their river crossings and eaten in native villages that depend on the animals for subsistence. His photographs are a quiet declaration of bias.

Not long ago he camped on the Kongakut River in the northeast corner of the Arctic Refuge. It was July, and he'd arrived two weeks early to scout and prepare for the caribou's fall migration. As if on cue, the leaders splashed across the river. Then the body of the herd swelled on the opposite shore, broke against the strain and swam across. Once on land again, pausing to shake off water, they headed south accompanied by the strange clicking sound in their hinged hooves. In four hours, 50,000 animals pushed through the river and up the cliff banks, heading for wintering grounds near Old Crow, Canada.

In the retelling, Hoshino's voice chokes with emotion. The occasion was an event he had longed for: a river of caribou thrashing across a clear-



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A SECOND TO GET THE SHOT.

The Spirit Of Alaska

water stream deep in the wilderness of the Brooks Range. Witnessing this ancient migration route across the Kongakut River and sensing a collective memory being passed to a new generation of calves, Hoshino experienced a profound sense of the continuity of life and his obligation to record it. Images from his encounter with the migrating caribou were published in the December 1988 issue of *National Geographic*.

Hoshino believes caribou best represent the spirit of Alaska's wilderness heritage. As they move down drainages or climb the next divide, giant caribou herds weave a living design; a spectacle older than time. Favoring windy ridges to evade mosquitoes, the herd in silhouette is a study in heroic folklore. In villages that were sited thousands of years ago to take advantage of this journey, caribou still provide a vital link in nutrition and culture. Ancient mythologies grounded in a spiritual connection to the Earth now compete with petroleum geologists, accountants and public relations people.

After cleaning the birthing areas on the coastal plain, grizzly bears follow slowly on the heels of the caribou. The grizzlies climb the mountain passes, looking for the weak or lame while picking off stronger calves and adults at stream crossings.

Hoshino says that watching grizzlies taught him the value of tension. "Wherever we go in Alaska we must think of the bear. This is the underlying tension and pressure of all our considerations while camping in the bush. The lesson of the bear teaches us to be aware of the unpredictability of the natural world." *Grizzly* is the title of Hoshino's first book.

Hoshino pauses before continuing and then says, "I've learned it is good to be frightened. Bears scare me, but then I become more humble, so this tension is a necessary thing."

Hoshino is more than a wildlife photographer; as a chronicler of the last, great, largely intact ecosystem within the United States, he's also tuned to the rhythm and whims of the evolving socio-political landscape. "We can't put native villages in museums. These communities will change as more access and development occur. We cannot blame them or

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accuse them for wanting the same consumer items that are a staple in more settled areas," says Hoshino.

"Today, Alaska is filled with biologists, data collectors and resource managers all trying to get a handle on the big picture." Tracing an arms-wide rectangle Hoshino's visual metaphor animates his face. "I'm not working in the political arena, but I fear decision-makers are not thinking on a long-term basis. I really worry about the future of Alaska. The necessity of holding closed large areas, complete ecosystems to buffer and balance the inevitable development pressure, must be considered," he says.

The strength of Hoshino's photography appears to come as much from his technical and artistic prowess as from his identification with the people who inhabit the land. In conveying the natural world's sense of coherence, a measure of gratitude and respect seems as important as focal length or film speed. Hoshino's images reveal an appreciation of the moment as well as the interconnected web of events that spawned it and then followed it.

Desire and understanding are like two legs of a tripod. Hoshino's persistence provides the third. A willingness to wait for the image already in his mind's eye is the driving force Hoshino uses to solve the problems that frustrate direct experience. One year, Hoshino chartered a flight out of Talkeetna to Tokositna Glacier, south of Denali National Park. The image in mind was a particular formation of the aurora borealis wreathed across the summit of Mount McKinley. It was mid-February, and he was alone on the ice; the plane would return in a month. Camped on the glacier, trying to sleep by day and fighting frostbite and loneliness, he prepared equipment each evening to make time exposures. In 30 days, the northern lights cooperated just once. He got the shot.

Hoshino's willingness to explore his emotional relationship with the natural world is evident in his latest project. Working on a book centered on southeast Alaska's archetypal features—glaciers, ancient forests and whales—often places Hoshino in harm's way. Drifting in a Zodiac near Admiralty Island, Hoshino and a companion watched spellbound as they realized four to five humpback

whales were "bubble-net feeding" directly below them. Hoshino says the panic was palpable as a circle of rising bubbles 30 feet in diameter surrounded the boat. The giant sea mammals, hunting herring by blowing a spiral net of bubbles as they raced toward the surface, broke off the chase at the last moment. Hoshino regards the near disaster as an epiphany, an awakening to the deeper nature of genetic wisdom, interspecies communication and value. As a photographer and writer, Hoshino's gift is how he succeeds in rendering these concepts visible.

In 1990, Japan's largest news-weekly, *Shukan Asahi*, ran a year-long series of articles by Hoshino describing his experiences in Alaska. The same year he was also named Japan's photographer of the year. Now working to translate 10 years of field notes to English, Hoshino intends to publish accounts of his interaction with Alaska's natural and cultural heritage. With a recently awarded Carnegie Foundation fellowship to his credit, it's likely Hoshino's work will be seen more widely in this country.

Considering again his relationship with Alaska forces Hoshino to think of his first home. "Japan is so busy, so crowded. But when I go back to Tokyo, I enjoy the city. I visit friends, go to the symphony and exhibits and live a very pleasant life. But in the busy routine of Japan, I forget I'm breathing, life goes stale," he says.

"In Alaska, after the plane has left me on a glacier or gravel bar, I suddenly realize I'm actually alive. My lungs are drawing air, my heart is pumping blood and my eyes are feeding information to my brain. Now, of course, this is a common thing. It occurs constantly in all of us, but I tend to forget it in Japan.

"In Tokyo I lose the rhythm and pulse of life. The crush of people, the pace and technology forestalls a sense of mortality that's very much with me in Alaska. And for that I'm grateful."

OP

Douglas Yates, who makes his home in Ester, Alaska, is a writer and photographer whose work appears frequently in Alaska magazine. A portfolio of ice sculptures by Yates, The Alaska Ice Postcard Collection—New Ice Carving From Fairbanks, Alaska, is available from 64th Parallel Press, Box 221, Ester, Alaska 99725.

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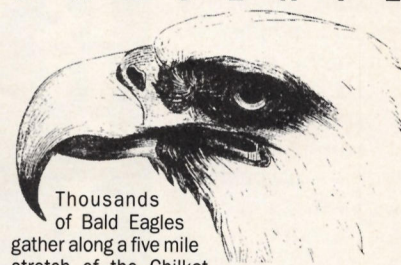
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READER TIPS

Wheel into action with these innovative approaches to using your car as a photo assistant!

Inspired by the night's snowfall, I ditched my book bag and hurried out to take up position before dawn. To justify cutting class, I headed for a favorite birding area to mix a bit of ornithology homework into the morning shoot.

Well ahead of the light, I sat in my car watching the eastern horizon take shape. Then it happened. Against the early glow, a dark shape shot past and landed in a roadside ditch not 10 feet away. It was a common snipe. As the light came up, I was delighted to have a subject that allowed me to stay out of the wind chill. The lesson of the day was to stay put in my vehicle and play the part of an inanimate object rather than a potential predator.

This technique works particularly well where there is a lot of traffic. As always with wildlife, long lenses make things easier—but don't wait until you can afford a 600mm to try using your car as a blind.

With any kind of blind, you will enhance productivity by putting yourself in a strategic position. In the case of the common snipe, the running water in the ditch had kept the ground from freezing. This offered a foraging area during a time when their options were limited. From my car, I was able to let the birds work

their way past me, then drive well ahead and wait for the next sequence.

For support, I prefer a monopod over window clamps or bean bags. This way you can keep the bulk of your lens inside so your side-to-side movement doesn't attract attention. Also, when you arrive on the scene, it is much quicker and less obtrusive to bring your camera into shooting position. Try to limit movements that will give away your disguise as something lifeless and non-threatening.

good distance upwind, shut off the outboard and let the wind do the work. A gradual approach is the key to gaining your subjects' acceptance.

If possible, align your drift to take you past the subject without coming too close. This allows you to sample the direction of light and the changes in background. Well in advance, I tie off my anchor so it dangles right at the surface of the water. This way I can put on the brakes without a splash. If you have a quiet electric motor, you

can use it for additional control.

When the bird takes notice of your approach, carefully slip your anchor overboard and wait. Preening or attention to potential prey signals that you can proceed.

The extra time can be spent learning the behavior of your subject. Above all, time allows you to gain acceptance beyond what you would normally expect. When your subject behaves without fear, the opportunities for great

pictures are abundant.

The use of your car or boat as a mobile blind boils down to utilizing all of your resources to make better pictures. It's not the textbook approach to wildlife photography, but it can be productive. And for the record, my ornithology instructor gave me an "A."

OP

CARB LIND

BY MICHAEL WILHELM



When you get tired of the road noise, try this technique from a boat. Now you can enjoy the serenity you expected when you took up nature photography.

In this arena, approach is everything. Forget what you have learned about staying downwind from your prey. In fact, do the opposite. At a

Security of expensive equipment on location is often a major concern for traveling outdoor photographers. That is especially true for those with vehicles that have no trunks, per se, such as four-wheel drives and vans. As a solution, an inexpensive, foolproof and easy-to-install car safe is available for those who want visual privacy for their equipment. This spacious container provides secure, inconspicuous storage for several large cases, long lenses and tripods as well as other valuables.

This car safe is a heavy-gauge steel contractor's tool box securely bolted to the floor of the vehicle and located to assure ease of access to equipment stored within. These tool boxes are manufactured for all-weather use in the back of pick-up trucks and come in a wide variety of sizes. The beauty of the contractor's box is that the tamper-proof locking mechanism is recessed into the box itself when closed, preventing vandalism by pry bars or bolt cutters.

The box is easy to install in a variety of vehicles. All that is required is an electric hand drill and a couple of wrenches. Prior to drilling, locate the box in the most convenient position for ease of access (from the outside of

PHOTOJEEP

BY BRIAN LOFLIN



the vehicle, if possible). Be sure that the lid is easily opened and clears windows and side mouldings. Also make sure that the tailgate closes and that its inside handle is accessible. Check clearance for wheel wells, spare tires and installed lighting as well.

Prior to drilling holes for bolting to the vehicle floor, inspect hole locations carefully for hidden wires, gas lines and the gas tank itself. To ensure accuracy, drill the holes from the inside of the box through the box and the floor of the vehicle at the same time. When inserting the bolts, place

them from the underside of the vehicle, with the nuts inside the box. For maximum security, use lock washers and locking aircraft-type nuts that are secured with a cotter pin or safety wire. Once installed in this manner, the safe can be removed from the vehicle only from the inside.

After installation, the addition of some insulation material at strategic points will minimize rattles from the locking mechanism, lid and handles. Additional insulation can increase the air-tightness of the box, minimizing intrusion of dust and dirt. **OP**

A few years ago, I decided to make some alterations to my van to allow for a degree of independence and security while working in the field. It has repeatedly proven to be an asset for shooting an ongoing project of mine

regarding the landscape and our environmental predicament created by resource use. It has worked out to be a good solution for providing a quick base in a remote place.

The project took four weeks to complete. The deck was professionally built by outside suppliers. The van was purchased unfinished and is a standard three-quarter-ton Ford vehicle. Outfitting it included my personal need to have studio-like qualities even in the outdoors. Large format takes more room physically and clear areas are a must for film loading and maintenance. I've used this truck for jobs where studio work is employed on location for commercial clients, museums, etc.

The interior has a thin hardwood floor (for easy cleaning); a bench seat for passengers and for laying out various acces-

sories; cabinets for equipment storage, supplies and clothes; and a camera vault under the passenger's bucket seat. In the vehicle I carry a futon for sleeping, a 12-volt refrigerator for food and film, a five-gallon water tank and sink with a hand pump and a portable toilet.

Outside, the van has a 4x7-foot shooting deck, custom fitted with an extra heavy-duty ladder (for safety with heavy loads). Attached to the vehicle frame are twin trailer jacks that can be let down for steadying the vehicle when using it as a station or blind with long lenses and slow shutter speeds.

The vehicle has an additional deep cycle, 12-volt battery supplementary electrical system for interior lights, a fan, the refrigerator and strobe battery-charging equipment.

The finish work on the interior is all custom (leftover materials from prop and set studio work), with a few things bought just for the project. It was a time-consuming effort to get it all just right, and now my friends and I have been enjoying some great outdoor photography! **OP**

PHOTOVAN

BY STEPHEN S. MYERS



There they were. Rows upon rows of tulips so bright they dazzled the senses. They appeared in red, pink and yellow. Some were backlit and others were frontlit or sidelit. Everywhere I looked around the fields of Skagit Valley, which is approximately 80 miles north of Seattle, tulips were ablaze in color.

It was tulip festival time, when for a few weeks in spring visitors from throughout the United States and other countries converged on the area to celebrate one of the nation's most colorful displays of nature controlled. Commercial tulip and daffodil growing, primarily for their bulbs, is not only big business, it's beautiful.

The photo opportunities in such an event are endless, and during the time my wife, Cilla, and I tiptoed through the tulips (yes, I did find myself humming and singing the tune) we encountered virtually every kind of camera format and lens. One Dutch photographer, who said access to these tulips was easier than to those in his own country's fabled fields, was among a contingent of view camera aficionados.

Wide-angle and macro seemed to be the lenses of choice among 35mm SLR shooters, and you couldn't blame them. The expanse of flowers almost demanded a super-wide lens to capture the overall picture.

Each flower radiated its own beauty and delicate nuances—a natural for macro. But I chose another tack—using a 300mm *f*/2.8 lens for the bulk of my tulip coverage. This is not a unique approach to landscape photography, but it is one often overlooked by photographers who strive to have everything encompassed within the frame and in focus with extreme depth of field.

There are no rights or wrongs in covering any subject. Some approaches just work better than others in certain situations. Stacking up rows of colors through the wide aperture of a fast 300mm lens certainly makes an impact.

Undoubtedly, the techniques of long-lens photography employed in other fields—sports, fashion, wildlife, and photojournalism—were important in my approach to telephoto tulips. I was constantly aware of paying special attention to the lens' inherent requirements. They included:

- **Stability by using a solid tripod.** While

handholding a 300mm lens is possible, those tulips weren't going to run away from me. A tripod with ballhead were virtual necessities for shutter speeds slower than $\frac{1}{250}$ sec. Sure, some steady-handed supershooters can handhold a tele lens at slow shutter speeds, but why take the risk of pictures ruined by camera movement?

- **Wide apertures for selective focusing.**

This is one of the most valuable assets of a fast telephoto lens. True, a wide aperture immediately reduces your depth of field and the closer you focus, the more shallow your depth of field

Tulips By Telephoto

Try this less-common approach to flower photography—shoot with a 300mm *f*/2.8 lens

TEXT AND PHOTOGRAPHY BY PETER SKINNER

becomes. But this is a tool worth employing, and while a viewer's eye will invariably hone in on the lightest, brightest part of a picture, a tack-sharp subject isolated in a field of soft focus also commands immediate attention.

- **Slow shutter speeds and subject movement.** A field of flowers is generally unprotected from the wind and even a gentle breeze will set those colorful heads swaying. Unless there's a steady wind, a breeze will usually die off for periods. Take advantage of those times. Conversely, a slow shutter speed when the wind is blowing can

(Cont'd on page 72)

The telephoto lens can do a lot of things, two of which are illustrated here: the inset photo shows isolation of particular graphic elements from the scene, with sharp focus from top to bottom. The larger shot shows creative control over depth of field by using a large aperture and isolating focus to a narrow band in the middle.





FAST TRACK!

The essence of a car race is speed. The essence of shooting the event is planning, foresight, skill and good equipment.

TEXT AND PHOTOGRAPHY BY JON EISBERG



SANYO

PIRELLI
GIRI
K-M-H
DIST. MIN. SEC. 10
PIRELLI

FERODO

HENIMONT

LONGINES

Agip

SCANI BATTERIE



Even as Formula One is without question the pinnacle of worldwide motor racing, a Grand Prix event is a spectacle unmatched. Drivers and manufacturers compete for a world championship run throughout 16 countries on seven continents including far-flung venues from Johannesburg to Adelaide, Sao Paulo to Budapest, and Montreal to Monte Carlo. This heady mixture of speed, danger, glamour and technology, which is brought to exotic locales at phenomenal expense, combine to make Grand Prix racing the most photographed sport in the world.

Shooting a Grand Prix offers an array of challenges. Some of the most talented sports photographers in the world form the corps of regulars who follow the Formula One circus. Those who can produce images a cut above the rest have truly distinguished themselves. Unlike many other sports,

IT'S CALLED THE MONZA MASH (page 50-51): The excitement peaks as 26 cars begin the Italian Grand Prix in Monza. To get the shot, photographer Jon Eisberg put a remote camera on a perch atop the scoring/timing tower.

Nikon F4, 80-200mm f/2.8 ED, Fujichrome Velvia, polarizer, 1/1000 at f/4.1

THE SERPENT'S BELLY (page 52, top): From the 50-story rooftop of the Renaissance Center in Detroit, Eisberg caught this Grand Prix racer entering the famous Chincane curve.

Nikon F3, Nikkor 80-200mm f/2.8 at 200mm, Fujichrome 50, 1/1000 sec. at f/4

TOP DOG (page 52, inset): Current world champion Ayrton Senna of Brazil rounds a slow corner at the Canadian Grand Prix in Montreal, giving photographers a rare opportunity to get close to the cars.

Nikon F3, Nikkor 600mm f/4, Fujichrome 100, 1/500 sec. at f/4

HOT CURVE ERUPTION (page 52, bottom): Sparks are flying just a few seconds after the start of the Brazilian Grand Prix in Rio de Janeiro. The heavily fuel-loaded cars, already moving at 160-plus mph, are starting to brake for the first corner. Their magnesium skid plates bottoming out on the bumps send up the fireworks.

Nikon F3, Nikkor 600mm f/4, Fujichrome Velvia, 1/2000 sec. at f/4

motor racing lacks frequent or predictable moments of peak action that can be captured by careful planning. With the exception of incidents at the start of a race, most "moments" that one manages to capture are largely a matter of luck. Imagination and technique go further than preparation and reflexes in producing a distinctive photograph.

A Grand Prix weekend is a three-

day affair: The first two days are comprised of practice and qualifying sessions, the final day is reserved for a morning warm-up and the race itself. I try to spend the first two days of the event doing more artistic or experimental work. During practice and qualifying, the cars tend to circulate on their own. These sessions are occasionally interrupted and are more conducive to changing one's location

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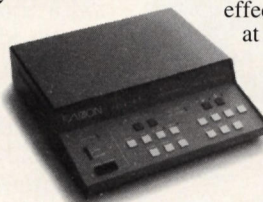
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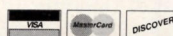
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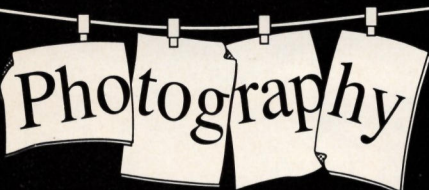
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Fast Track

frequently and trying pans, zooms or other low percentage single car shots.

The primary determining factor of the quality of the shots to come from a particular Grand Prix is the nature of the race circuit itself. Some tracks, such as Spa in Belgium or Monte Carlo in Monaco, are situated in such magnificent natural surroundings that they virtually eliminate the possibility of taking a poor photo. With such a surfeit of opportunities, however, careful planning is required to maximize the two-and-a-half hours of shooting available each day. I always allow one day prior to the weekend for scouting and preparation. One cannot afford to waste time looking for shots or trying to figure out logistics while cars are on the track.

Tracks where nice shots are harder to come by are more common. The new circuit near Barcelona exemplifies this trend in modern racetrack construction. While it is a state-of-the-art facility, safety considerations have eliminated whatever natural features it once may have possessed. Runoff areas are so wide and photographers are kept at such a distance from most of the track that by the end of the weekend, a 600mm seems like a wide-angle.

As with any location photography, weather is a major consideration. Tight head-on shots with long lenses are best done on bright, clear days with little haze to dilute the image. These ideal atmospheric conditions can also be used to show the track's surroundings. By climbing a hillside or otherwise distancing oneself from trackside (and other photographers), the event can often be put in a unique or telling perspective.

Work in the pit area is best saved for overcast skies. The lack of contrast and harsh shadows enables one to photograph drivers in their helmets, or details of the cars themselves, without using fill-flash. Darker conditions also favor the use of shorter lenses and slower shutter speeds, or the inclusion of colors that may become beautifully

saturated in the more diffuse light.

On race day, the event's photographic focus must shift to the more pedestrian task of documenting race action. A Grand Prix typically runs only about 90 minutes, so one must have an effective plan of action that avoids too much moving from one spot to the next. This is the time to do multiple car shots in front of grandstands packed with spectators. Harsh conditions from pouring rain to shimmering heat may be emphasized. Cars are covered with dirt, rubber and oil by the end of the race, which exemplifies the grueling nature of the sport.

One cannot afford to waste time looking for shots or trying to figure out logistics while cars are on the track.

The techniques I use to shoot racing can be divided into three broad categories: the use of long lenses, slow shutter speeds and the application of a unique perspective. For me, the fun really begins at either 600mm at $\frac{1}{30}$ sec., or up in a tree.

Few serious Formula One photographers come to a race without a 500mm or 600mm telephoto. Proficiency with these lenses is an absolute prerequisite. Although motor racing is perhaps the ultimate example of continuous linear movement, the most frequently seen race photo is a static frontal view as seen through a long lens. Since the same cars shot with the same equipment in the same light will produce roughly the same image, there is only one element that can distinguish one shot from the rest. Background is critical and often overlooked.

With a long lens, a relatively minor change in the photographer's position can transform an ugly or distracting backdrop into something special. The background, however, should remain a subtle element of the shot and never compete with the car for attention. I always shoot with a long lens wide open to isolate the car and blur the background to the maximum degree. This entails some risk—to fill the frame with a race car through a 600mm lens at $f/4$ does not permit enough depth of field to allow much more than the driver's helmet to remain tack-sharp.

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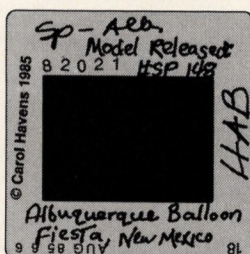
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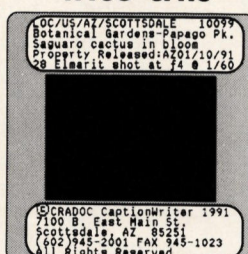
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To get a decent percentage of shots with the cars moving toward you at incredible speeds takes a bit of practice. It is not a matter of reaction, but one of total anticipation—if the car ever appears sharp through the viewfinder, you've missed the shot.

Shooting from a low angle with telephoto lenses can add drama to a shot, and is often the only way to bring a nice background into play. Photographing the cars as they crest a rise on the track can be another low percentage effort because the cars appear so suddenly. Patience, however, can help one find a rhythm to these shots. I usually watch the cars through the lens for a couple of laps in an attempt to get the timing down

If the car ever appears sharp through the viewfinder, you've missed the shot.

before shooting the first frame.

The essence of racing is speed. By far the most effective way to impart the sense of speed into a still photo is by using slow shutter speeds. For cars running at 150 mph or above, panning at $\frac{1}{25}$ sec. will create an effective blur. But for real impact, shooting at $\frac{1}{30}$ sec. or less can create striking results. At some tracks, one may gain access to areas where it is possible to lean over the guardrail and almost touch the cars.

Wide-angle pans shot from this close are another low percentage effort, but the results can be very rewarding. As with all slow pans or zooms, one key element (usually the driver's helmet) must remain sharp for the shot to really work. One must be resigned to burning a lot of film—I'm usually satisfied to find one frame out of 10 to keep.

The most consistently dramatic photos to come from a season of Formula One will be those of the race starts. A Grand Prix start is an awesome spectacle. In the final seconds awaiting the green light, the air is shattered by 20,000 unmuffled horsepower screaming at 12,000 rpm. Twenty-six of the world's most sophisticated rac-

ing machines accelerate from a standing start to 100 mph in under four seconds. Attempting to impart this drama into a single frame requires extra effort.

Gaining a unique angle or perspective may go a long way toward this end. I am always looking for a new place to shoot from or to mount a remote. Remote setups can be both the most rewarding and frustrating aspects of photographing the race's start. Anything can go wrong—they can misfire or not fire at all, or exposure can change drastically between the time of the setup and start.

Many remote operations require a somewhat clandestine approach. If I really want a shot, I never ask permission unless someone's cooperation must be enlisted. Within the hierarchy

FULL PIT BOOGIE (page 57, top): At the Spanish Grand Prix in Jerez, two Ferraris draw the pit crew treatment. Eisberg shot from the roof of the garage.

Nikon F3, Nikkor 24mm, Polarizer, Fujichrome 50, 1 sec. at *f*/8

MASTER OF SPEED AND TIME (page 57, bottom): At the Portuguese Grand Prix, racer Ivan Capelli gets the pan blur treatment from inside the pit area. Grandstands and bleachers make the colorful streaks in the background.

Nikon F3, Nikkor 80-200mm, polarizer, Fujichrome 50, $\frac{1}{60}$ sec. at *f*/8

GALACTIC INVADER (page 58, top): By both panning and zooming at a slow shutter speed against a colorful background of spectators at the Canadian Grand Prix, Eisberg got this futuristic impression.

Nikon F3, Nikkor 80-200mm, Fujichrome Velvia, polarizer, $\frac{1}{30}$ sec. at *f*/16

THE CENTURION (page 58, middle): Italian driver Alessandro Nannini is highlighted at the Hungarian Grand Prix.

Nikon F3, Nikkor 400mm *f*/2.8, Fujichrome Velvia, $\frac{1}{2000}$ sec. at *f*/2.8

THE MARLBORO MAN (page 58, bottom): A 16mm fish-eye lens on a monopod-mounted camera catches the pit stop of Ayrton Senna's Marlboro-sponsored race car at the Portuguese Grand Prix, Estoril, Portugal.

Nikon F3, Nikkor 16mm *f*/3.5 full-frame fish-eye, Fujichrome Velvia, $\frac{1}{500}$ sec. at *f*/8





(Cont'd on page 64)

“I was paid to spend five weeks photographing in the Amazon thanks to my NYI Home Course.”

Buck Taylor

Larry (Buck) Taylor
Pascagoula, MS



I was sent to photograph missionaries in the Amazon,” writes NYI grad Buck Taylor. “It was rough at times – sleeping in a hammock, traveling by dugout canoe – but it was also beautiful. The jungle was quiet and the people simple and loving. Best of all, **I was told my pictures were the best** they had ever received. All this was made possible thanks to my NYI training.”

Since 1910 NYI training has made dreams come true for thousands of students like Buck. Or like Eugene Bayout of Portland, OR. “**Thanks to your course,**” Gene writes, “**I’m living out my dream, earning my bread as a portrait photographer. NYI home training did more for me than any school I ever attended. The Course is the best. It’s great!**”

Still, you may be wondering: *Can I learn at home to earn extra money with my camera too?*

Yes, you can, with NYI’s help. Before he enrolled, Robert Sirovy of Vista, Cal., also wondered. Now he writes: “**You turned my hobby into a nice second income in my spare time!**”

And Glenn Lewis of Murfreesboro, Tenn., has opened his own environmental photography business. Glenn always enjoyed taking wilderness pictures.

“**Now,**” he says, “**I’m paid to do it. I love it!**”

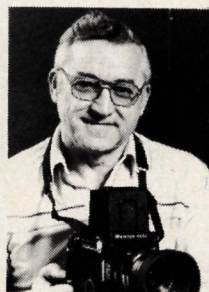


These success stories are not unusual for NYI Home-Study grads. Fact is, NYI has trained *more* successful photographers than *any other school in the world*. But what if you’re not interested in making money or starting a new career? What if you’d just love to see your pictures win prizes, be exhibited, get published? Can NYI help you also?

We sure can. After his NYI Home Course, Larry Souza of Wichita Falls,

Texas, rejoiced because “**Now my pictures are seen in newspapers all over the country.**”

And Leo Paro of Burton, Michigan, fairly glowed: “I’m proudest of having one of my pictures published in *Readers Digest*. **Thanks, NYI. You made a successful photographer out of me at the tender age of 50!**”



We helped Daniela Neukamm of Ontario, Canada, too. She was “**thrilled to see my photographs published in a national magazine.**” Daniela adds, “Your step-by-step home training and personal cassette tapes gave me the skill, encouragement, and confidence I needed to succeed!”

Are you still wondering if NYI can help you too?

Paul Owens of Miami, Florida, also had some doubts. “**Now,**” he writes, “**I must admit enrolling with NYI was one of the best decisions I ever made.**”

“**It’s the easiest-to-understand photographic training I’ve ever seen,**”

says Darrell Peew of New Paris, Ohio, adding, “**At the NYI Home-Study program, still an**”

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Why are NYI Home-Study grads so successful? W.J. Shaw of Upper Marlboro, Maryland, sums it up: “**As an educator I can truly say, yours is by far the best course I’ve ever seen.**”



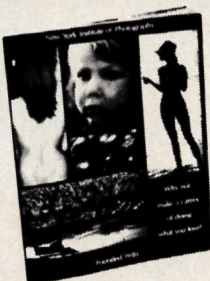
All these NYI students started the same way. They sent a coupon or called Toll-Free and had NYI’s lavishly illustrated Home Course color catalog mailed to them — *absolutely free*.

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PHOTOGRAPHY BY
GEORGE LEPP



MY BIG CHICKADEE (left):
The Elan's quiet, speedy motor
drive and quick autofocus
helped Lepp keep up his
photographic pursuit as this
Mountain Chickadee hopped
from branch to branch just 10
feet from the camera.

Canon EOS Elan, Canon EF 100-
300mm *f*/5.6L in autofocus servo,
Fujichrome 100, aperture priority
set at *f*/5.6

OPTICAL EXTRACTION
(below): Lepp relied on the
Elan's mirror lock up feature to
minimize vibration while using
a long telephoto as an "optical
extraction tool" to pull out the
roof detail.

Canon EOS Elan, Canon EF
300mm *f*/2.8L with EF 2X
teleconverter, tripod, Ektachrome
100X, 1/500 sec. at *f*/8

FIELD TEST: A



Whenever I'm assigned a camera for a field test, I get a little nervous if it's a camera less capable technically than what I normally shoot with. I don't like having my hands tied with a camera that might not be up to the tasks at hand. The Canon EOS Elan replaces the EOS 630 model, which is two notches below my usual EOS-1 and one step below my back-up EOS 10s. I shouldn't have worried because the Elan handled all that I asked and I've used it as my primary camera for the past few weeks, including a fall color workshop with 10 participants at California's Mono Lake.

So what's different about the Elan compared to the replaced EOS 630, the rest of the EOS line, and other competitors in the same price range?



range from 28mm to 80mm, a first for a built-in flash. Other multi-functions for the flash include an exposure compensation for controlled fill-flash, where the photographer can set the flash in one-half-stop increments to vary the output up to two stops toward overexposure or underexposure relative to the ambient light exposure reading. This feature was previously only available on larger flashes like the Canon 430EZ and Nikon SB-24. A second curtain sync flash function can also be set on the EOS Elan by setting a custom function.

One other feature of the Elan's built-in flash is a small projected light

NON EOS ELAN

Quiet Please

To start with, the Elan is considerably quieter than any other 35mm SLR camera available. Canon claims a noise reduction of from one-fourth to one-eighth from previous EOS cameras. Whatever the actual number, it's a noticeable difference. The camera doesn't clunk, clank or whirr when the shutter fires and the motor advances the film.

This noise reduction is the result of several manufacturing techniques, the most important of which is the implantation of a urethane rubber belt drive film transport. The belt is strengthened with aramid fiber cords (used to make bullet-proof jackets and radial tires) so the camera doesn't throw a belt during a burst of continuous frames.

The effect is a lowered sound level with the camera still offering a continuous shooting speed of three frames per second in one-shot autofocus and manual focus, and 2.5 frames per second in predictive autofocus.

I can foresee the advantage of the Elan's quiet drive around skittish mammals and birds. I expect this technology to find its way into Canon's upper models in the future where more pros will be able to take advantage of quieter camera operation. For now this feature is only in the Elan.

Flash Control

The EOS Elan incorporates a sophisticated pop-up flash. The built-in unit has a guide number of 39-56 for ISO 100 film depending on the zoom feature within the flash. The flash automatically adjusts the angle of flash output in response to the zoomed position of the attached lens in a

that shines into the subject's eye for a second to minimize red-eye when the flash goes off.

Autofocus

Like the EOS 630, the Elan has both one-shot and servo predictive autofocus capabilities. The Elan now incorporates the Cross-Type image sensor that improves autofocus on both horizontally and vertically aligned subjects. The frames per second during predictive autofocus is the same for both the EOS 630 and the Elan at 2.5 frames per second. In manual and one-shot autofocus, the motordrive speed is five frames for the replaced 630, and three frames per second for the Elan.

While testing at Mono Lake, I tracked birds with the Elan's predictive autofocus using a 300mm f/2.8 and 2X EF teleconverter with the same excellent results as the 630 and 10s EOS cameras. A feature missing from the Elan that was available on the 630 is Custom Function Control number four, which allows the activation of the autofocus from the AE Lock button on the back of the camera when the AF is set to AI Servo. This feature has become important to many of us for fast-moving sports and wildlife photography.

Exposure

All the automatic and manual exposure modes found on the EOS 630 are carried over to the Elan. Added to the Elan are the 10s PIC modes that allow a neophyte photographer to select the appropriate program for portraits, scenics, close-ups or action photography. For instance, the PIC

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Field Test: Canon EOS Elan

mode for action or sports automatically sets the camera for AI Servo autofocus, continuous motordrive and evaluative metering. Just the way I would manually set up the camera to take action shots.

The metering modes on the Elan are the same as the 630 with six-zone evaluative, 6.5 percent partial, or center-weighted average metering. I used the evaluative and partial metering for the landscapes on my workshop with excellent results.



Automatic exposure bracketing is built into the camera with one-half-stop increments that fire in a series of three immediate exposures. I wish this feature could be individual exposures instead of three rapid ones. There is too much chance of camera movement during three continuous exposures, and when the mirror up function is used, only the first exposure benefits from the mirror being up for two seconds. Exposure bracketing can quickly be done manually by using a new back-mounted quick control dial.

Canon's "Green Zone" setting, making the camera as close to a point-and-shoot as possible for the first-time user, has been upgraded to detect camera shake and subject movement. The shutter speed is automatically set to a faster speed if camera motion is detected, and it switches to AI Servo autofocus if the subject is moving.

Canon's Bar Code Programming is available on the Elan, as it is on the 10s. Bar Code Programming is described in a booklet of photographs

showing different problems that might match what you are trying to solve. You then read a bar code with an optional bar code reader and transfer it into the camera.

Camera Handling

Here's where the EOS Elan really shines. Canon has changed the layout of controls to what I feel is a better arrangement than on the 630, and in some cases even the 10s. On the back of the camera is a quick control dial that, when switched on and rotated with the thumb, will change *f*-stops in manual mode, exposure compensation in one-half stops during aperture and shutter priority modes, and fill-flash compensation when the pop-up flash is used. It's quick, and I found it to be very useful, just as I have on the EOS-1.

The new placement of several buttons for autofocus, motordrive and meter controls are easier to access instead of little doors to open with fingernails, as is the case on the 630 and EOS-1.

The new command dial brings the rest of the functions to the top of the camera and makes them much easier to operate. On the 630 you had to open a door and push two small buttons simultaneously to set the auto-exposure bracketing. On the Elan, it's just a turn of the dial with the left thumb. Between the command dial and the quick control dial with the right thumb, you could say that an all-thumbs photographer would have an advantage using the EOS Elan.

Firing the shutter remotely is the same as with the EOS 10s. The RC-1 remote will fire the camera by infrared beam. It can also be used at a distance of up to 16 feet to allow the photographer to be in the photograph.

The best feature is the two-second delay with the mirror locked up at the beginning. This is effectively a mirror lock-up for times when you want the camera perfectly still during long exposures. The same lock-up is possible from the camera, but with a 10-second delay instead of the two seconds with remote. This must be the least expensive camera with a mirror lock-up and depth-of-field preview.

In the three weeks I used the EOS Elan I had no problems accomplishing professional tasks as well as turning the camera over to a workshop participant who had previously only used a manual Minolta SRT100 of ancient vintage. He wasn't able to utilize the full potential of the EOS system immediately, but within minutes he was light-years ahead of the camera that had been his staple for many years. This is precisely the advantage of the Elan.

A beginning photographer can easily take successful photographs with the basics controlled by the "Green Zone" or PIC modes and continue to expand his or her expertise without outgrowing the camera. I could easily use the Elan for professional photography (I have) if the 10s and EOS-1 were not available.

In comparing the Elan to the 630, the Elan breaks new ground with its quiet operation, versatile built-in flash, mirror lock-up and improved handling provisions. The only features missing that were on the 630 are Custom Function Control number four and the ability to leave the end of the film out at the end of the rewind. Not a bad trade considering the price.

How does the Canon EOS Elan compare with the other cameras in the same price range? The new Nikon N5005 has the built-in fill-flash capability, a slightly lower light operation at -1 EV, and tracking autofocus, but not the quiet operation, auto-exposure bracketing, zoom flash, mirror lock-up and frame per second speed with predictive focus of the Canon Elan.

The Minolta 3xi offers some new technologies first shown with the Maxxum 7xi, such as Eye-Start automation, an eight-segment metering system, low -1 EV light metering with fuzzy logic and remote off-camera TTL flash. Yet Minolta left off from both the 3xi and the 7xi depth-of-field preview and mirror lock-up, two important tools that are on the Canon EOS Elan.

The bottom line is that some really sophisticated cameras are now available for entry-level 35mm SLR camera users at lower prices. Compare the features and the prices, and then make use of the terrific technologies available to make your images better, not just easier.

OP

Swamp, Early Morning Mist; Emerald Lake, Canada

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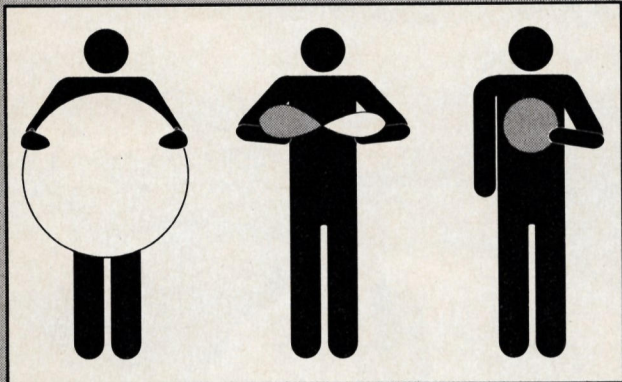
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Fast Track

(Cont'd from page 58)

of Grand Prix and track officialdom, there are scores of people who can turn down such requests. It is far simpler to climb onto a bridge over the track at 3 a.m. Sunday than to get official permission to do so at 10 a.m.

A positive mental approach is vital for this type of work. A Grand Prix is a chaotic event. I am constantly dealing with negative forces, including the weather and the size of the crowd. Diplomacy, persistence and fortitude enable one to produce art in the midst of this confusion.

Shooting a Grand Prix can be an arduous physical task as well. I generally carry 40 to 50 pounds of equipment during a race, which takes its toll after three days. One is constantly climbing hills, scaling fences, sliding down embankments, squeezing through crowds or slogging through mud. Much of the work I have produced over the years has had surprisingly little to do with creative inspiration or technique. It has more

to do with sheer physical effort.

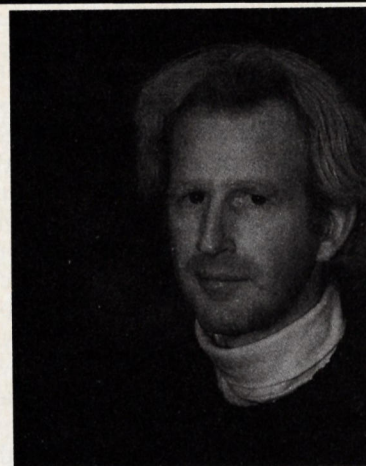
Financial rewards for most Formula One photographers are, in most cases, not commensurate with the

Much of the work I have produced over the years has had surprisingly little to do with creative inspiration or technique. It has more to do with sheer physical effort.

risks we face. Motor racing is dangerous for all involved. But it gets in your blood, and it is rare privilege to travel the world with and share the camaraderie of a special group of

people so dedicated to their profession that most would continue to pursue it for free.

OP



Jon Eisberg is a sports and travel photographer based on the East Coast. He shot his first Formula One race in 1979 and now covers Grand Prix racing for Road & Track Magazine, and for photo agencies in Japan, France and Great Britain.

(Cont'd from page 18)

The majority of the bears I saw were females with cubs. A mistake made by many people was to assume that every bear seen alone was male—not necessarily so.

I believe the reason most of the bears seen along the road were female is that their proximity to the road kept the males away. As male bears often kill cubs, the females may have found that being near the road, with all the buses and people, gives them and their cubs a good measure of protection against the males, who usually avoid contact with humans.

In an earlier column, I suggested using an 80-200mm zoom lens for photographing the bears from the bus. For anyone planning to photograph the bears at a closer distance, a 400mm or 600mm lens is a must, and a 1.4X or 1.6X teleconverter is also of great help.

Park regulations state that a photographer cannot go off the road to photograph a bear that is within a quarter-mile of the road, but most

bears approach or cross the road at some time. Regulations also require a bus driver to take you a quarter-mile further after spotting game. You can then walk back to get closer to your subject. A professional photographer with a driving permit must be adjacent to his or her vehicle when the bears are close to the road.

I found more opportunities to photograph bears in June and July, while I was in Alaska by myself, than I did in August when my driving permit came in. It was my best bear summer ever in Denali.

The park's most famous bear, and the most photographed, was the Sable Mountain sow and her newborn triplets. They frequented Sable Pass, Igloo Canyon and Cathedral Mountain. It was only after several weeks of trying that I was able to get them in my viewfinder. My formula for success is hours expended equals results achieved. I put in the hours and was eventually successful in photographing the sow and cubs on many occasions.

I enjoyed working most on the

Stoney Creek sow and her new twins. Over the years, I have probably taken more photographs of bears, caribou and fox in the Stoney Creek drainage than in any other part of the park. The Stoney sow was feeding on berries, grazing on grasses, digging for ground squirrels—often close to the road—and paying absolutely no attention to the clicking of camera shutters and the whirring of video cameras.

The Thoroughfare Pass sow and her two 2-year-old cubs were also favorites. The cubs were almost as big as their mother. These bears were also the most playful, although when they "played," it was rough. The mother would often jump on one of the cubs and hold it down with sheer weight and strength. Evidently, her young were used to such roughness and often imitated it with each other.

Denali National Park, a true "bear heaven," would undoubtedly offer you more photographic opportunities for bears than any other United States national park. It's definitely worth a one-in-10 chance, four-day trip. **OP**



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Shooting the sun and moon effectively is a discipline that must change with the seasons. Heed these tips for great sky shots.

TEXT AND PHOTOGRAPHY BY LEWIS KEMPER

CRATER RISE (above): Making this shot of the sunrise atop Mt. Haleakala Crater, Maui, Hawaii, was a case of knowing in advance where the sun would first appear.

Nikon 8008, 24–50mm Nikkor, Fujichrome Velvia, $\frac{1}{15}$ sec. at $f/11$

DOUBLE YOUR ARCHES (opposite, top): Lewis Kemper knew from scouting the location the day before that the sun would rise through both North Arch and Turret Arch at Arches National Park.

Nikon 8008, 75–150mm Nikkor, Fujichrome 50, $\frac{1}{8}$ sec. at $f/22$

I remember sitting at one of Ansel Adams' lectures in Yosemite as he was discussing his photography. He quoted someone by saying, "Chance favors the prepared mind." This always stuck with me and sounded like good advice.

To be a good nature photographer you must be aware of your physical surroundings, know something about astronomy, the physical sciences and map reading. This information will

SKYHOOK (opposite, middle): Just before moonset, a day or two after the total solar eclipse in July 1991, Kemper positioned himself to frame the crescent moon with a boojum tree.

Nikon 8008, Tokina 80–200mm $f/2.8$, Fujichrome Velvia, $\frac{1}{2}$ sec. at $f/11$

MOONSET/SUNRISE (right): The vantage point was Zabriskie Point, Death Valley, Calif. The full moon was setting as the sun was rising behind the photographer.

Wista SP 4×5, 210mm Ilex, Polaroid Prochrome ISO 100, $\frac{1}{2}$ sec. at $f/22$



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assist you in photographing sunsets, sunrises, moonrises and moonsets.

The Sun

Everyone knows the sun rises in the east, but exactly where depends on the seasons. You can make calculations or carry charts and instruments to help you figure the exact position of the sun and its angle of declination.

The sun is closest to true east at the spring and fall equinoxes, the farthest north near the summer solstice and the farthest south at the winter solstice. The sun varies approximately 15 degrees every two months at the middle latitudes. With this knowledge, a

As I travel around a new location I also use a compass and map to decide when a particular view will be receiving the best light.

map and a compass, anyone can figure out where the sun will rise. The same holds true for sunsets. In the winter the sun sets south of due west and in the summer it sets north of due west.

When I travel to a new area, I frequently carry a compass so I can orient myself to the sun. A good compass such as the Silva, with the degrees marked all around the face of the compass will do. There are a few facts to remember to make compass reading simple. There are 360 degrees in a circle. North is zero degrees, east is 90 degrees, south is 180 degrees and west is 270 degrees.

Since the position of the rising sun can vary as much as 60 degrees at middle latitudes, that means the sun can come up anywhere from 60 degrees to 120 degrees, or northeast to southeast on a compass.

As I travel around a new location I also use a compass and map to decide when a particular view will be receiving the best light. One of the best actions you can take to improve your pictures is to observe nature with care. When you scout out locations, pay attention to sun and moon positions and plan your days accordingly.

A local newspaper will list times for

FocalWare 1200

At some point every photographer needs to remember some tricky math calculations, whether it is a filter factor or a processing time percentage change. These calculations and formulas are both difficult to remember and perform. Now, it is getting easier. Visual Departures, makers of innovative photographic products, has teamed up with John Warner, a North Carolina commercial photographer and computer wizard, to produce a computer system specifically for photographers.

FocalWare 1200 will determine the sunrise and sunset at any time of year at any longitude and latitude worldwide, or the sun's position in the sky at a specific time of day and year. The computer will calculate depth of field and bellows extension for zoom lenses and view camera users; you also get instant conversion of light-balancing filtration to CC values, filter factors, reciprocity failure corrections, accumulated flash exposure and processing time percentage changes.

FocalWare 1200 is a pocket computer designed by Sharp with a special FocalWare Eprom chip that contains the photographic software.

The computer resembles a pocket calculator, except it has eight special function keys for running the different programs.

A comprehensive instruction book takes you through examples of all the computer's photographic functions. The computer is designed to give you visual prompts and questions to guide you through each calculation. In most cases, you just answer yes or no questions and input your specific data.

While not every photographer will need or use every program included, there are six or seven programs that would be useful for the outdoor photographer. The top four include programs for figuring the sun's position, reciprocity factors for long exposures, filter factors and depth of field. The depth-of-field program is particularly helpful since many new zoom lenses lack a depth of field scale. If you use large format or do any darkroom work, the programs for bellows factors, filter pack neutral density reduction and processing time percentage changes will come in handy.

If figuring out formulas for exposures and filters bogs down your creativity, then FocalWare 1200 could be your savior.

sunrise and sunset. There are many fun and inexpensive computer programs that can give a great deal of astronomical information. The advantages of these programs are that they can calculate the sunrise, sunset, moonset or moonrise for any location and any date usually many years in the future. The best place to locate these programs are in astronomy, computer and photography magazines. I use Distant Suns software (Virtual Reality Laboratories, (805) 545-8515) for my Amiga computer. IBM-compatible software is also available, for example: *Stargaze 2.0* (CEB Metasystems, (805) 499-0958), *SunTimes*; *Moontimes* (Zephyr Services, (412) 422-9930), *Dance of the Planets* (A.R.C. Science Simulation Software, (303)667-1168), *EZCosmos* (Future Trends Software, (214) 224-3288). For those of you without computers, try *Exposure Guides For The Sun, Moon, And Planets* by

Ginger LeGendre (Sky Publishing Corp., (617) 864-7360).

Exposures For Sunrises And Sunsets

When photographing a sunrise or sunset, exposure compensation must be made. Human eyes have the ability to look at a sunset or sunrise and see amazing detail in the shadow areas as well as in the highlights. Film does not have that capability.

When reviewing students' work, I consistently find sunrise or sunset pictures with large black areas of foreground and well-exposed suns. This is because the light meter in their cameras is trying to expose the sun at middle gray, thus causing the rest of the objects in the picture to turn black because of underexposure.

To see detail in the foreground one must either increase the exposure by one-and-a-half to three stops or use a graduated filter to help correct the

exposure. How much you compensate on exposure depends on certain factors, including the focal length of the lens, the brightness of the sun and the effect you want to achieve.

There is no one correct compensation; it varies with each circumstance. I recommend that you increase the exposure by two stops and bracket around that exposure in one-half-stop increments. If you choose to use a graduated filter, a two or three stop filter will work best when pointing directly into the sun. The disadvantage of using a filter is lens flare. Anytime you point the lens of a camera directly toward the sun you run the risk of lens flare. Reduce this risk by using clean lenses and filters.

If I am not using a graduated filter for a sunrise or sunset, I remove all my filters including the skylight filter. This helps to reduce the flare possibilities. You should also be aware that zoom lenses are more subjective to flare than most fixed focal length lenses.

One other item to consider when photographing sunrise or sunset is that the best picture is not always looking at the sun, but looking at what the sun is illuminating. The quality of light at sunrise and sunset is very appealing. It is not always necessary to have the ball of the sun in your picture to capture the feeling of this magical time of day.

The Moon

The moon follows the sun in that it also rises in the east and sets in the west. Finding out moonrise and moonset times and the phases of the moon can be tricky. Many newspapers do not print this information. A good calendar will give you moon phases for the year. The above-mentioned computer programs are a good source for finding out the times for moonrise and moonset.

It is important to note that the moon is on a 30-day calendar: Full moons are 30 days apart. Besides the full moon, crescent and half moons photographed at sunrise can be very appealing.

It's easy to remember that the best moonrise pictures are made a couple of days before a full moon. This way the moon is above the horizon before the sun sets. At this time, you get exposures where the moon is large and bright, yet there is plenty of ambient light to illuminate the landscape. The day

before being full, the moon rises in conjunction with sunset, giving you warm light cast in the direction the moon is rising. At this time (just before and during a full moon) you also get moonset in conjunction with sunrise. This way if you want the moon above a geological feature that lies in the west you can photograph at sunrise.

Moon Exposures

During a spring workshop at the base of Fisher Towers in Utah, I was discussing the techniques for photographing the moon as it rose above the towers, which were lit by the setting sun. Two members of the group had learned that the correct exposure for moon photography was the Sunny 16 rule, placing the aperture of the camera at $f/16$ and the shutter speed at the reciprocal of the film speed.

My meter readings were at least a stop to a stop and a half more open than theirs were. I explained that they would not see any detail in the surroundings if they followed the Sunny 16 rule. We each shot at the exposures we wanted and later had the film developed. The two participants who followed the Sunny 16 rule had very detailed exposures of the moon in totally black skies. I had pictures of a detailed moon rising above a warmly lit rock tower.

The Sunny 16 rule is the exposure to use if you want to photograph the moon alone or for use in double exposures. But for placing the moon in naturally lit surroundings, I recommend reading the scene as always and making the exposure off the meter. After all, you are taking a picture of sunlit objects, the moon included.

By paying attention and preparing myself for the events surrounding the movements of the sun and moon, I have been able to capture hundreds of pictures emphasizing the beauty of these two celestial bodies. Knowing the sun and moon are interconnected to the psyche of every living creature on this planet makes me aware of how my pictures can move people. I hope yours will too.

OP

Lewis Kemper, contributing editor, is the founder of *Sierra Photographic Workshops*. He specializes in large format and 35mm landscape and wildlife photography.

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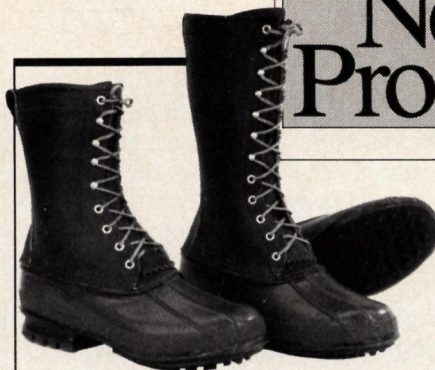
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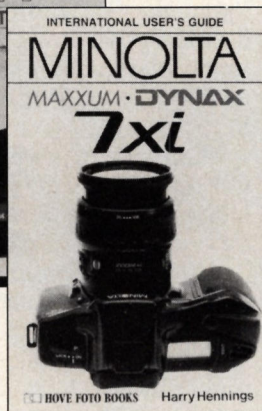
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multiple flash and basic and advanced flash technique are included. Both manuals are gadget bag-sized (7½×5-inches), run roughly 175 pages, and are illustrated in color and black-and-white. Suggested retail: \$18.

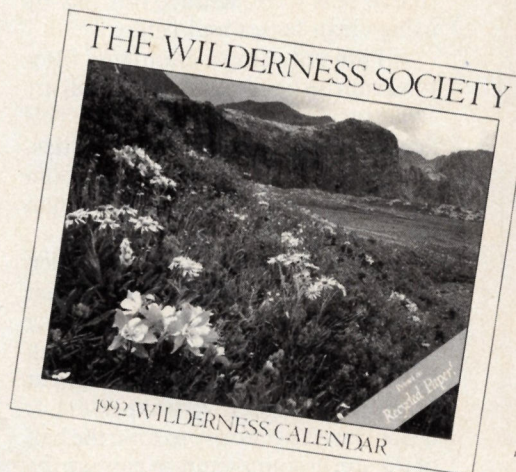
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New Photo Gear Guidebooks

Good news for photographers who want to go beyond original factory equipment manuals... the *Complete User's Guide To Minolta Maxxum 7xi* explains in clear, easy-to-understand language the complete operation of all camera features and functions. Advice on selecting film, lenses and other accessories and how best to use them is provided as well.

Also new is the *User's Guide To The Nikon SB-24 Flash System*. In addition to comprehensive user information, sections on off-camera flash,



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The Wilderness Society is a national, mainstream conservation group with 400,000 members dedicated to protecting America's magnificent inheritance of land, beauty and biological diversity. The publisher will contribute proceeds from calendar sales to a conservation organization to further its wilderness goals. Price: \$10.

For more information, contact: Westcliffe Publishers, P.O. Box 1261, Englewood, CO 80150, (303) 935-0900.



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For more information, contact: GMI Photographic Inc., 1776 New Highway, P.O. Drawer U, Farmingdale, NY 11735, (516) 752-0066.

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(Cont'd on page 88)

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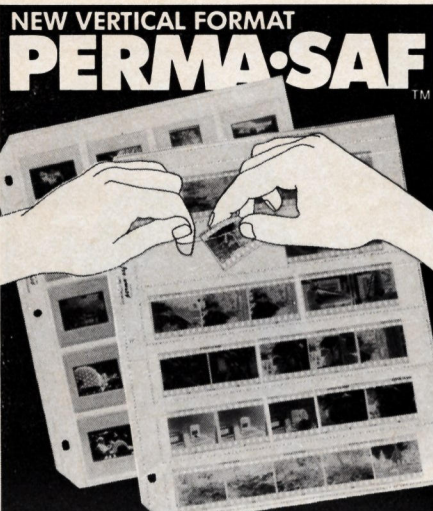
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Tulips

(Cont'd from page 48)

also create an unusual and pleasant blurring effect.

• **A long lens will stack up lines.** Look for rows of colors or shapes and take advantage of the telephoto lens' ability to compress the scene. This works well with almost any landscape where there are rows of trees, mountains, and in this case, different colored flowers.

• **An out-of-focus mass of color adds drama to a picture.** This is especially true if it's a vivid red. It's easy to throw selected areas out of focus with a long lens.

• **Long lenses are optically better at or near maximum aperture.** But increased depth of field definitely has its place with telephoto shooting. Just remember you'll be using a slower shutter speed so be aware of the two most obvious potential pitfalls: camera movement and subject movement. One you can control, the other requires timing and patience.

• **Vary your viewpoint.** This gives you the chance to observe those strong lines of color and shape from new perspectives.

Tulips and daffodils look good under virtually any lighting conditions, but the softer light of early morning and late afternoon is preferred for picture-taking, especially the latter when the light not only gets softer but warmer. And high overcast, often found in this area of Washington, can create a natural diffusion filter with even softer lighting.

For the tulip and daffodil assignment I used a Nikon FE2 with Tokina 300mm f/2.8 lens, a sturdy tripod and ballhead. Depending on lighting conditions, I used Fujichrome 50 and 100, Kodachrome 64 and EPP 100 films. Each has its place but the colors of the subject made it hard to go wrong regardless of film.

So, the next time you tiptoe through a field of tulips, or any mass of flowers—wild or cultivated—try photographing them through a long lens. I hope you enjoy your results. **OP**

Peter Skinner is a writer/photographer with a corporate communications business in Anacortes, Wash. Originally from Australia, he spent 10 years as director of public relations with Santa Barbara's Brooks Institute of Photography before moving north.

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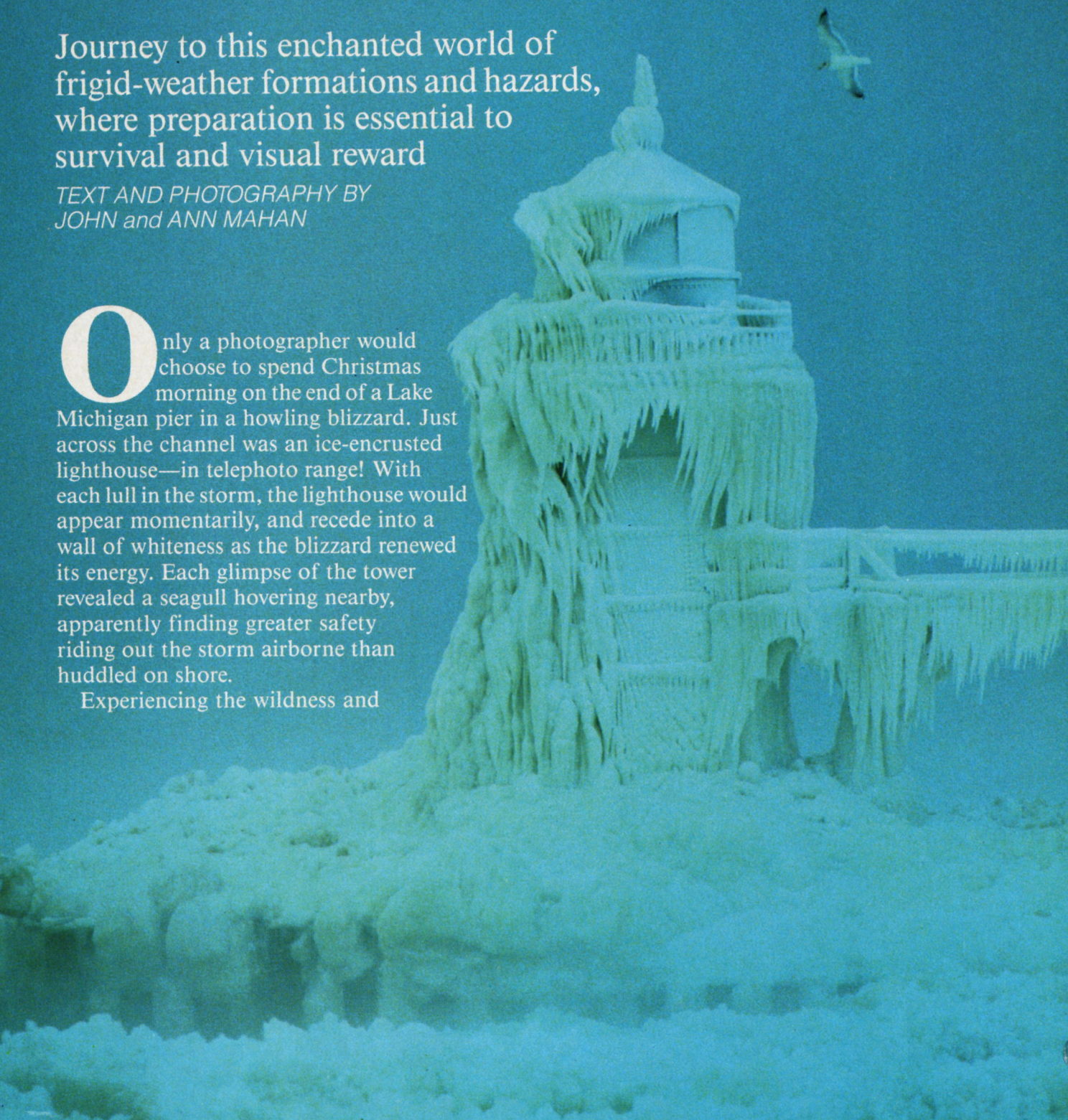
The Great Lakes WINTER SHOOTER

Journey to this enchanted world of frigid-weather formations and hazards, where preparation is essential to survival and visual reward

TEXT AND PHOTOGRAPHY BY
JOHN and ANN MAHAN

Only a photographer would choose to spend Christmas morning on the end of a Lake Michigan pier in a howling blizzard. Just across the channel was an ice-encrusted lighthouse—in telephoto range! With each lull in the storm, the lighthouse would appear momentarily, and recede into a wall of whiteness as the blizzard renewed its energy. Each glimpse of the tower revealed a seagull hovering nearby, apparently finding greater safety riding out the storm airborne than huddled on shore.

Experiencing the wildness and



UNDER SIEGE (left): The North Pierhead Light, St. Joseph, Mich., wears a heavy ice coat during a Christmas morning blizzard. Hand pressure on the tripod-mounted lens minimized the effects of wind, while hand-firing instead of cable release kept mirror vibration in check.

Canon F-1, Canon 200mm macro f/4, tripod, Kodachrome 25

WINTERGLOW (below): A Lake Superior sunset afterglow on the Keweenaw Peninsula was taken after sunset with a cable release, small aperture and long exposure, approximately 1/2 to one sec.

Canon F-1, Canon 20-35L f/3.5, tripod, Fujichrome Velvia

THE LEE SIDE SOLUTION (bottom): Blowing sand and snow during a blizzard near St. Joseph, Lake Michigan, presented a hazard to the Mahan's equipment. They shot from their car during lulls in the winds, leaving a lee side window open to "cold soak" the camera equipment so snow wouldn't stick to the lens.

Canon F-1, Canon 85mm f/1.8, Kodachrome 64





LAKE STAR (left): Winter camping on Lake Michigan at Newport State Park, Wis., delivered this sunrise shot. The beautiful morning followed a blizzard the night before that almost blew the Mahan's tent over.

Canon F-1, Canon 20-35L
f/3.5, Kodachrome 25

DEPTH IN THE FIELD (below): The autumn potpourri, touched with hailstones from a passing squall, is held in sharp focus thanks to Canon's tilt and shift lens. The tilt delivered a broad depth of field, allowing more freedom in positioning the camera.

Canon F-1, Canon 35mm
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Winter Shooter

vitality of the Great Lakes is one of the real benefits of specializing in this area. As in all seasons, winter along these inland seas offers unique opportunities that could fill an outdoor photographer's subject wish list: mountainous dunes and boreal forests, rugged rocky shores and steep cliffs, points and peninsulas, islands and archipelagoes.

Accurate descriptions of the Great Lakes Basin must include superlatives—the largest freshwater lake on Earth, the world's longest expanse of freshwater dunes, some of the planet's oldest exposed bedrock, one of the greatest concentrations of lighthouses. Here is an ecosystem defined and bound together by 20 percent of the Earth's freshwater and 80 percent of the freshwater supply of the North American continent. During winter, it sometimes seems as if every drop is bound up in snow and ice.

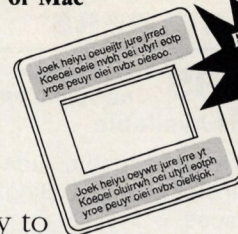
Summer's balmy lake breezes and the endless horizon views of tossing waves and sparkling blue/green water have given way to polar air masses that bring lake-effect snow squalls and arctic scenes. Ice accumulates along the shorelines in pressure ridges and windrows. Attached shelf ice spreads out from shore, extending many miles into the lake, while ice floes wander aimlessly through the open waters.

Lying, according to the book *United States Coast Pilot*, "in the midst of a climatological battlefield" where the three major air masses of the North American continent collide, the Great Lakes are recipients of weather imported from other areas. The lakes have a way of putting their own spin on these weather systems. In early winter, the open waters give up their stored summer heat and moisture to incoming air masses, resulting in squalls and blizzards that are a sailor's terror and an outdoor photographer's delight.

And then there are the quiet, serene and contemplative times. On calm nights we have often heard a soft and delicate tinkling sound floating in off the lake, as thin broken shards of ice move against each other in the gentle swells of the open water. The cracklingly cold mornings that often follow produce unique beauties: the pastel softness of dawn on snow-laden rocks, an ethereal fog (arctic sea smoke) that wisps and dances over the open lake, and the fairy-world fans and needles

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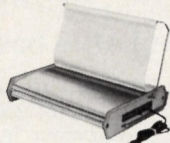
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Winter Shooter

of hoarfrost (water vapor crystallized on winter-bare limbs and twigs).

Winter is a time of simple essences and elegant simplicities. Photographic equipment and technique, to be effective, must mimic this Spartan season. When asked the secrets of his remarkable photography, one photographic sage is reputed to have said, "f/8, and be there."

In the ice and often deep snow of the Great Lakes Basin, "being there" can easily be half, or more, of the battle. Here, constancy is not a word that can accurately be applied to anything but change. We have more than once applied blue wax to our cross-country skis in the morning, only to have to add red wax and soon find ourselves scraping it off (and the four inches of attached snow!) to reapply blue wax—all in the space of a few hours and several abrupt temperature/snow condition changes.

And then there is the Canadian Shield. This exposed ancient bedrock in the northern upper lakes is still rebounding from the weight of the last glaciation, still trying to clothe itself with vegetation and topsoil. Many parts of the Canadian Shield are just too treacherous and abrupt for skis. This is slow-going snowshoe country.

Perhaps the most variable and inconstant topography in the basin is that of the dunes, especially on the eastern shores of Lake Michigan. Even in winter, these shifting and drifting mountains of sand continue their slow movement near the shore, as westerly winds constantly mix sand and snow into a giant moving parfait.

With the windswept bareness of the foredunes, snowshoes often appear unnecessary. But be forewarned that what appears to be solid sand may be a thin covering over several feet of crusted and puffed-up unstable snow... tread cautiously.

With the exception of established cross-country ski trails, rangers at Sleeping Bear Dunes National Lakeshore discourage visitors from being on the dunes in winter, especially the inland (eastern) side where windblown snow and sand accumulate. Twice people have been caught in avalanches. In both cases, the victims were rescued, but not without some tense moments, including nearly an hour's search for a buried youngster. In late winter and early spring, melting layers of snow

beneath the sand can cause significant slides of frozen sand.

Ice is also a concern. This peculiar solid phase of water may be beautiful through the lens, but underfoot it becomes a flat-out hazard. Every year we hear of yet another unfortunate soul who wandered onto unstable ice, only to become marooned on a newly-formed ice floe heading out to sea until rescued by helicopter. Near shore, windrows often shift without warning, and crevices and caverns are frequently hidden by roofs of thin, crusty snow and ice.

There are a few protected bays and harbors that often become solid enough to support people, snowmobiles, and even cars—such as the ice road from Bayfield, Wis., to Madeline Island in Lake Superior. Even solid and secure ice is not to be trusted; it has a unique ability to precipitate sudden gravity attacks.

Slipping and falling on the ice is treacherous enough when empty-handed. The addition of highly valued photographic equipment creates a disastrous moment of indecision on the way down. Which to protect, body or equipment? John experienced such a decisional dilemma on the ice at the tip of the Leelanau Peninsula in northern Lake Michigan. It cost him a couple of broken ribs... but the cameras and lenses survived and performed without a complaint the rest of the day.

Once "being there" is accomplished, the f/8, or technical simplicity component of the sage's advice takes on special meaning. Even the simplest task becomes more difficult in winter. Gloved fingers fumble with knobs and switches; bare fingers freeze to bare metal. Viewfinders fog up and tripods tilt like sinking ships in the snow.

This is a time for simple, solid, straightforward cameras and techniques. It has been our experience that the Canon F-1 is one of the most reliable and hardy cameras for rugged winter use. (We have also been impressed with the performance of the smaller and lighter AE-1 Program in inclement weather.)

Although we carry an embarrassing array of photographic gear in warmer months, our equipment for extended wintertime forays usually includes: two camera bodies for each of us, one wide-angle lens each (20-35mm zoom and 24mm), one moderate telephoto each

(fast 85mm), and one longer telephoto each (80–200mm zoom and a 200mm macro that goes to life-size without extra extension). Regarding tripods, we find the Bogen leg locks easier to use and more reliable in winter.

The key to using cameras and lenses in winter is to get them thoroughly cold as quickly as possible and keep them cold. Snow will slide off cold equipment. It will melt, soak into and then freeze in warm equipment that is brought out into the cold. When tent camping, we keep our cameras and lenses in a pack outside the tent to avoid the moisture condensation that accumulates from breathing all night inside the tent. Always put cold cameras and lenses in a sealed plastic bag before bringing them into a warm building. Otherwise, condensation can soak them just as thoroughly as a quick water immersion. Our cameras have never failed us in winter using this method.

Bring spare batteries and keep them warm in an inside pocket. (We can get at least five days and four nights use out of one battery with our Canons in minus-10 degrees F to 25 degrees F weather.) Unfortunately, the newer auto-everything cameras we have used seem to eat batteries at an alarming rate!

Carrying cameras and lenses safely yet accessibly when skiing or snowshoeing is a challenge. Our preferred system is the CamJacket—a chest bag for one camera and mounted lens that is secured with a chest strap. The camera can be suspended in the bag from either an elastic neckstrap or straps that hook to loops on backpack shoulder straps. This system protects the camera while keeping it easily accessible. Galen Rowell's new system from Photoflex also appears to have a chest bag that would do well.

A simple, effective and reasonably priced way to carry an extra lens or two is with a "water bottle parka," available at backpacking stores. This foam-cushioned bag with a belt loop and zippered lid is made for carrying one-quart nalgene water bottles in winter; however, it also works admirably for carrying a long lens or zoom, or two shorter lenses (with a swatch of foam between lenses) on a belt.

When it comes to film choice, we subscribe to the old frontiersman's point of view: "Beware the man who has only one rifle—he probably

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knows how to use it." We use Fuji Velvia almost exclusively. This film's versatility is remarkable, as long as it is not underexposed. Velvia is extremely sharp, holds details in shadows when correctly exposed, and suffers little when pushed one stop. When faster film is required, we use Kodachrome 200, pushed as much as two stops for night photography.

Winter is not a time to venture forth with unfamiliar equipment and film. Do the testing and experimentation close to home and then enter more remote areas with a simple, effective and familiar system. After all, the critical equipment in nearly all photographic successes and failures is the gray matter found 4 to 6 centimeters behind the camera's eyepiece.

If experienced and engaged, that same gray matter is also superior to any modern camera's "fuzzy logic," computerized metering program. The new metering programs do have their attributes, but there is a certain subconscious Zen to effectively exposing a piece of film. This Zen comes only after the science and facts are mastered and pushed through the filter of thoughtful experience. It is at this point that photographers become adroit at knowing when to rely on the camera's limited decision-making abilities and when to override it with our own limited abilities.

Nonetheless, winter does pose some unique technical problems and solutions, first that it is so much whiter than any other season. Camera meters average everything to shades of gray, specifically 18 percent gray. But winter steadfastly refuses to average out to anything near 18 percent gray. Even the Sunny 16 rule (1/ASA equals shutter speed at f/16 in full, direct, midday sun) is not as useful and reliable in northern winters.

Clear days are uncommon events around large bodies of water in the winter, and in northern regions the sun's brightness seems diminished by its southerly position in the sky.

The solution? Learn what to meter and how to compensate. With several metering methods, we can double-check our exposures. For example, we meter snow in the dominant light in our scene and open up one to two stops. Or, we meter tree trunks of approximately 18 percent gray appearance; or meter our (clean) palms and

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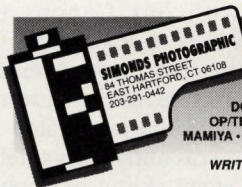
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Winter Shooter

open one stop; or, when available, meter the clear blue north sky 45 degrees above the horizon. All of these are ways of reading objects of different exposure values and knowing how to compensate and arrive at correct exposure. The Zen comes in knowing when, and how much, to tweak exposure and make the resulting image reflect the feeling the original scene generated in the photographer.

Finally, the low sun and short days that many view as wintertime's big negatives are, for photographers, some of its biggest assets. Even at mid-day, the winter sun is comparatively low. The lower the sun, the more warmth and character it imparts, partly due to the increased atmosphere it must penetrate, and partly due to its "side-lighting" effect.

This low sunlight is often called "sweetlight" for its magical ability to imbue objects with a warmth and character of universal appeal. Sigurd Olson gave the name Ross Light to the day's last warm rays, after the name of a photographer friend who first described it to him. Sweetlight, Ross Light, whatever the name, it is a truly wonderful experience. And although wintertime provides shorter days, when they are sunny, they come with a higher percentage of this magical light.

Magic is probably the best single description of this time of crystalline elegance in the Great Lakes Basin. While many people make their annual winter pilgrimage south to the land of perpetual and monotonous warmth and green-on-green, we stay behind. The show is just beginning as wind blows snow in off the lakes, intermittently hiding islands and peninsulas in its veil. The nights become cold and the stars shine with a piercing brightness, as northern lights dance and pulse while the temperature plummets. Ice expands, sending resonant groans and cracks through the night. And an owl hoots. It feels good to shiver as the enchantment returns. **OP**

John and Ann Mahan specialize in photography and writing that focuses on the beauty and uniqueness of the Great Lakes region. The Mahan's latest book, *Wild Lake Michigan*, is available from *Voyageur Press*, 123 North Second St., Stillwater, MN 55082, (612) 430-2210.

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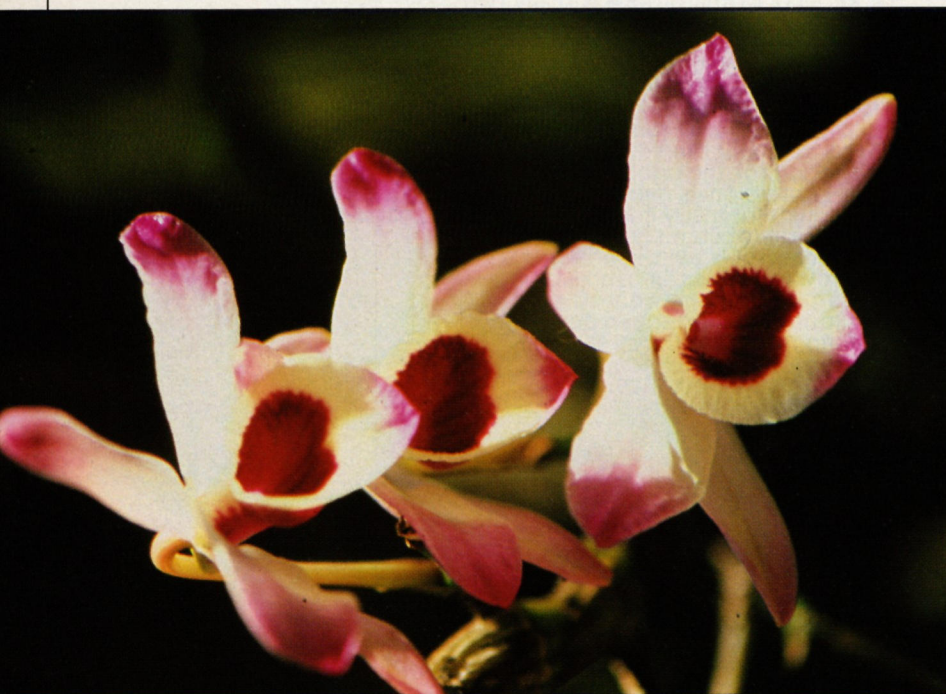
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Scenery • Colorado Mountains	June 20-26
Scenery & Wildlife • Glacier N.P., Montana	July 11-17
Seacoast & Mountain Scenery • Western Oregon	July 18-24
African Wildlife & Scenery • Namibia & S. Africa	Aug. 15-31
African Extension • Namibia & S. Africa	Aug. 31-Sept. 5
Scenery • Grand Teton N.P., Wyoming	Sept. 19-25
Wildlife & Scenery • Yellowstone N.P., WY	Sept. 26-Oct. 2
Polar Bears • Churchill, Manitoba, Canada	Oct. 16-23, Oct. 23-30
Bald Eagles • Chilkat River, Alaska	Nov. 14-20
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Levin has spent 17 years visiting the Everglades. His work appears in national and international publications including *Audubon* magazine, *Sierra* National Geographic books and *Time*. Douglas is a studio and free-lance photographer and a staff photographer at Dartmouth College.

For more information, contact: Hulbert Outdoor Center, RR #1, Box 91A, Fairlee, VT 05045, (802) 333-9840.

Hawaiian Native Forest Bird Photo Safari

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Cheesemans' Ecology Safaris has designed an in-depth opportunity to photograph foraging and courtship behavior of a possible nine species of Hawaiian honeycreepers. The tour is limited to eight people with three professional bird photographers as leaders.

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The workshop takes place on the Big Island from Pu'u La'au and Hakalau Forest to Saddle Road Kipukas and Mauna Loa Strip Road. There are also opportunities to photograph scenery, native peoples and active lava flows.

For more information, contact: Cheesemans' Ecology Safaries, 20800 Kittredge Rd., Saratoga, CA 95070, (408) 741-5330.

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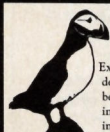
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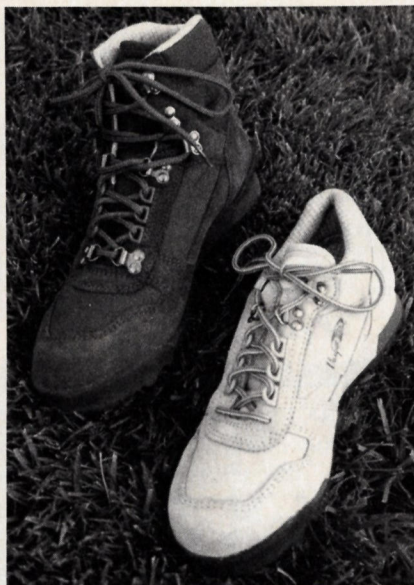
Write to:

Lynne Werner

OUTDOOR PHOTOGRAPHER Magazine
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New Products

(Cont'd from page 71)



Clarion Super-Light Hikers Cover The Market

Clarion II and III hiking boots offer Vasque's Variable Fit System to custom fit narrow, medium and wide feet. Along with greater coverage, the Clarion provides personalized fit unusual in a super-light hiking boot. High-tech features include uppers of tough nylon and split leather, a triple-density midsole, biomechanically shaped rubber landing pads and a high-density midsole stabilizer. Leather side bar support strap seams are positioned to minimize abrasion.

Like many hikers, Clarion has speed lacing. But Clarion has a unique recessed double-rivet hook at the ankle for extra support. Clarion II for women comes in teal/gray; Clarion II for men comes in blue/gray or green/brown. Clarion III is a men's oxford in gray.

For more information, contact: Vasque, 314 Main St., Riverfront Center, Red Wing, MN 55066, (612) 388-8211.

Close-Up Attachment For Mamiya 6

A new close-up attachment for the Mamiya Rangefinder Camera is designed for use with a standard 75mm lens, locks easily to the camera and permits close-up photography from a 20- to 40-inch distance from the film plane. The field area covered

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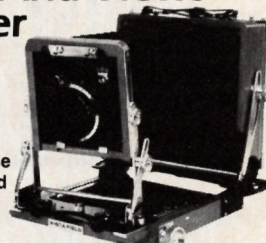
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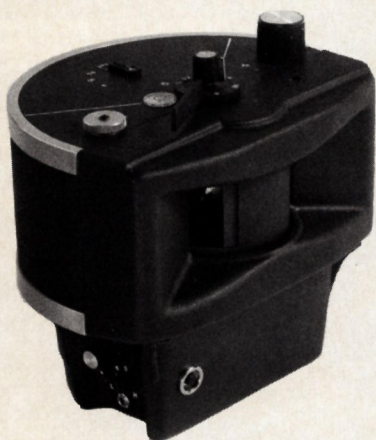
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New Products



is from 30×30-inches to 14×14-inches. The attachment comes with a fitted storage case.

For more information, contact: Mamiya America Corp., 8 Westchester Plaza, Elmsford, NY 10523, (914) 347-3300.



Cyclops Widens View With Mark III

Following such panoramic cameras as the Cyclops Wide-Eye and the Mark II comes the Mark III. Among this camera's attributes are: a battery-operated swing lens covering 120 degrees on 120 or 220 film, 10 shutter speeds from $\frac{1}{125}$ to five seconds, and an $f/2.8$ 75mm, six-element Saphir lens. The $f/2.8$ series Saphir lenses are characterized by high resolving power and large field of view, resulting in remarkable image quality in both color and black-and-white.

The Mark III's extended range of shutter speeds plus the focusable lens system offer photo opportunities previously not possible. Supplied with viewfinder, charger and remote firing. Price: \$2,900.

For more information, contact: WW Inc., 16640 S. 104th Ave., Orland Park, IL 60462, (708) 403-7576.

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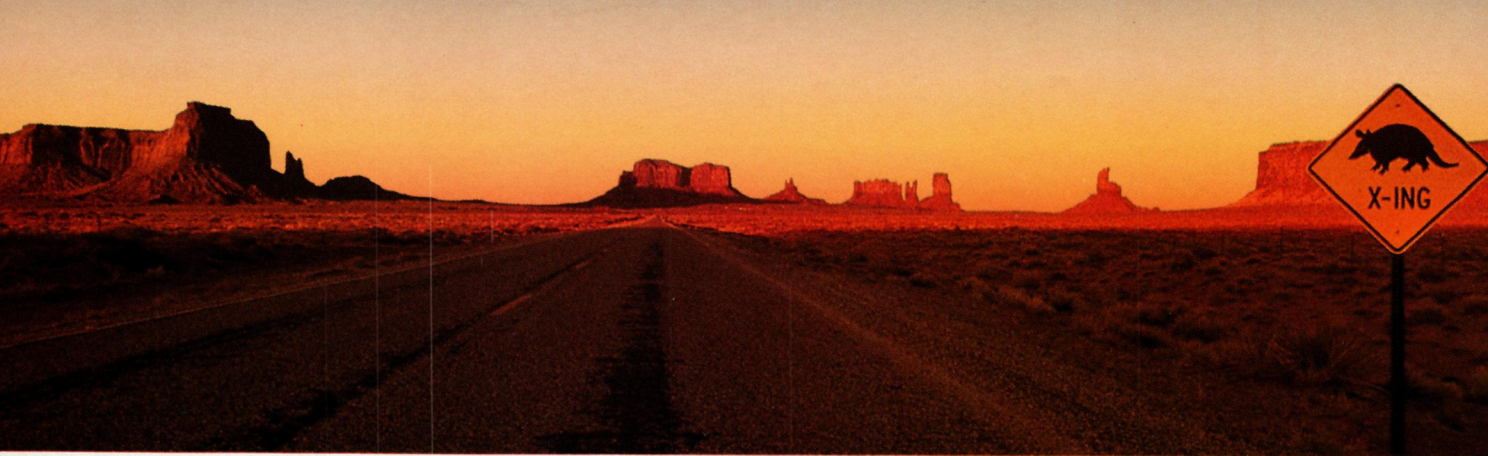
Photo

Last Frame



***SOLITARY SENTINEL:** Steven Fuller, photographer and winter keeper at Yellowstone Park's Canyon Village, shot this bison bull in the Hayden Valley—which harbors an average winter range of 1000 bison. Fuller speculates the bull was heading toward a thermal area just behind the hill, not a bad place to be in February.*

Nikon F3, 35mm lens, Kodachrome 64, 1/250 sec. at f/5.6



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